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**Negotiated rationalities, politicised identities
Intergenerational relations, water conflicts and mining in Chiu-Chiu, Chile**

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**NEGOTIATED RATIONALITIES, POLITICISED IDENTITIES:
INTERGENERATIONAL RELATIONS, WATER CONFLICTS AND
MINING IN CHIU–CHIU, CHILE**

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Thesis submitted for the degree of Doctor of Philosophy in Geography (Arts) Research
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2014

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ABSTRACT

Much work in political ecology that addresses indigenous people tends to accentuate the ways in which their communities unite around a shared rationality and/or politics when faced by 'threatening' outsiders. While providing insight on indigenous lives and struggles, this focus nonetheless tends to preclude a more nuanced appreciation of how indigenous communities may be internally differentiated, and with what effects. Differences may be linked to such things as gender, education, residency, income and age, and these differences may be reflected to a greater or lesser extent in how individuals or groups in a community articulate perspectives on diverse issues including local development and which external actors the community ought to work with.

This thesis seeks to contribute to the development of a more nuanced view of indigenous communities and the differences that may characterise them. Drawing on a political ecology perspective, and based on ethnographic fieldwork, it explores perceptions of water use and conflict in the indigenous community of Chiu-Chiu in northern Chile. This community has been severely affected by the massive water demands of large-scale mining – such that traditional agriculture is in jeopardy. Yet how residents respond to this and other changes impacting the village is differentiated, with age-related differences often at the forefront. Indeed, as this thesis shows, intergenerational dynamics have influenced: how individuals view local development and its associated rationality; how community positions are articulated to outsiders, by whom, whether this results in schisms, as well as how far external actors capitalise on them; and how the perceived costs and benefits of local development may be unequally distributed, prompting resistance by some individuals and groups. The thesis concludes with suggestions on how a nuanced understanding of indigenous communities can be elaborated.

GLOSSARY

SPANISH TERMS

- *Aguas Antofagasta*: Chile's northern region (Region II) water utility.
- *ADI Alto el Loa* ('Indigenous Development Area'): An area that includes the indigenous communities of Caspana, Conchi Viejo, Lasana, Ayquina-Turi, Cupo, Toconce, Chiu-Chiu, Taira, San Pedro Estación and Ollagüe.
- *Asociaciones de canalistas* (Association of canal users): organisation in charge of administering primary infrastructure, such as dams and main irrigation channels.
- *Chilenidad* ('Chileanness'): A term to describe a set of cultural expressions that have originated or been adopted in the Chilean territory.
- *Chilenización del Cobre* (Chileanisation of copper): Progressive movement by which the Chilean government acquired control of the major foreign-owned mining companies.
- *Comunidades de Agua* ('Water communities'): Local 'water' communities responsible for secondary infrastructure, such as distribution channels.
- *Concertación* (Also called *Concertación de Partidos por la Democracia*; *Concertación de Partidos por el No*) ('Coalition of Parties for Democracy'): A coalition of centre-left political parties in Chile, founded in 1988.
- *Criollos* ('creoles'): Spaniards born in the New World.
- *Cueca Nortina*: Family of musical styles and associated dances from Argentina, Chile, Bolivia and Peru.
- *Gaceta de los Tribunales* ('Courts Gazette'): Journal of Law and Jurisprudence.
- *Gran Minería* ('Big mining companies'): Large scale mining operations.
- *Gremialistas* ('gremialists'): Main doctrine of the liberal-conservative right-wing movement that emerged in the second half of the 1960s. Founded by Jaime Guzman at the Pontificia Universidad Católica de Chile in 1966.
- *Junta de Vigilancia* ('Supervisory Committee'): Supervisory committees in charge of monitoring the use of 'natural' sources of water such as rivers.
- *Indio*: Indian.
- *Kunza* (or 'Cunza'): Also known as Licanantay: an extinct language once spoken in the Atacama Desert of northern Chile by the Atacameño people.

- *Nacionalización del Cobre* ('Copper Nationalization'): A unanimous vote on 11 July 1971 that authorised the Government to nationalise the three largest copper mines, all of which were US owned companies in Chile: Anaconda, Kennecott and Cerro.
- *Norte Grande* ('Big North'): One of the five natural regions into which CORFO divided continental Chile in 1950. It stretches from Peru in the North to the Copiapo River in the South.
- *Pachamama* ('Mother Earth', 'Mother World'): A good spirit revered by the indigenous people of the Andes.
- *Patria Nueva* ('New Nation'): Period of Chilean history from the victory of the Andean Army and the Battle of Chacabuco (1817) to the resignation of Bernardo O'Higgins (1823).
- *Patria Vieja* ('Old Fatherland'): Period of Chilean history from the First Junta of the Government (18 September 1810) to the Disaster of Rancagua (1 October 1814).
- *Patrón de San Francisco* ('Saint Francis of Assisi'): Associated with the role veneration of Saint Francis of Assisi in the village of Chiu-Chiu.
- *Pucara* ('Pukara'): The ruins of a fortification made by the natives of the central Andean cultures.
- *Reconquista* ('reconquest'): A period of Chilean history (1814-1817) when the defenders of the Spanish Empire restored their domain in Chile.
- *Salar de Atacama* ('Atacama salt flat'): The largest salt flat in Chile, located 55 km south of San Pedro de Atacama.
- *Salitreras* ('Nitrate mines'): Nitrate mines located in northern Chile.
- *Taquirari* ('Takirari'): An Andean dance that comes from eastern Bolivia.
- *Trote* ('Trot'): Type of dance that is typical of northern Chile. The dancers step to a trotting rhythm.
- *Unidad Popular* ('Popular Unity'): (abbreviation UP) Coalition of left-wing (socialist and communist) parties in Chile that supported the successful presidential candidacy of Salvador Allende in 1970.

ACRONYMS

ADI	Indigenous Development Area
BRIC	Brazil, Russia, India and China
CEPI	Special Commission for Indigenous People
COCHILCO	Chilean Copper Commission
CONADI	National Corporation for Indigenous Development
CONAF	Corporation of National Forestry
CORFO	Chilean Economic Development Agency
CSR	Corporate Social Responsibility
DOH	Directorate of Hydraulic Works
DGA	General Water Directorate
ECLAC	Economic Commission for Latin America and the Caribbean
ESSAN	Sanitary Services Company of Antofagasta
FONDENOR	Development Fund for the North
GRI	Global Report Initiative
ICMM	International Council on Mining and Metals
IFC	International Finance Corporation
IMF	International Monetary Fund
ILO	International Labour Organisation
ISI	Import-substituting industrialisation
INDAP	Institute of Agricultural Development
MOP	Ministry of Public Works
NGO	Non-Governmental Organisation
SAG	Agricultural and Livestock Service
SEA	Environmental Assessment Service
SERCOTEC	Chile's Technical Cooperation Services
TNCs	Transnational Corporations
UN	United Nations

ACKNOWLEDGMENTS

I would like to thank my PhD advisor, Raymond Bryant, for supporting me during these past four years. I have really appreciated his dedication and commitment to my research as well as his guidance and orientation. During these four years I learned from him a way of facing challenges that went beyond this PhD: with effort and professionalism.

I also want to thank my London friends (from Chile and elsewhere) for giving me encouragement to keep working, with a special mention to Regent's Park football games and to International F.C for becoming spaces of joy and happiness. Thanks also go to my parents, to Claudio, to my grandparents (Tita y Tata), my half brothers and sisters, my friends, especially Oriana, and to my best friend 'Mosca.'

Also, I would especially like to thank my beloved wife Bernardita for all her support and patience. She is the only person in the world who really knows how amazing and difficult this adventure has been for us. Thank you for pushing me to study for this PhD and for believing in my dreams. I love you! Finally, I would like to thank Aurora for putting everything in perspective and for filling us with joy.

I dedicate this thesis to my beloved wife Bernardita for her constant love and unconditional support.

...In honour of Mrs Erica, a person who has struggled with dignity and strength, one of the people to whom the Loa River owes its life...

CHAPTER 1. INTRODUCTION

The aim of this chapter is to introduce the main topics of the thesis, its contribution to knowledge and its specific contents. Specifically, it will initially introduce a political ecology view of environmental conflicts in Latin America (section 1.1), as well as the competing rationalities that seem to be embodied in these types of conflict (section 1.2). The chapter also explains the research questions and key theoretical influences (section 1.3), which will be developed in Chapter 2. The thesis structure and the main components of the subsequent chapters are then described (section 1.4).

1.1 ENVIRONMENTAL CONFLICTS IN LATIN AMERICA: A POLITICAL ECOLOGY VIEW

Latin America is a region that has long held the attention of political ecologists. This region has notably been a place believed to be replete with empirical evidence regarding both reductionist views of development and unequal power relations within environmental conflicts (Boelens, 2007, Bryant and Bailey, 1997, Escobar, 1988). This is because Latin America is a region where natural resources and relations between social groups and nature, are predominantly measured by elite groups in purely economic terms, without integrating social content (Escobar, 2008). Therefore, it has tended to follow an economic model that rejects other perspectives, and that has long failed to identify culture as a significant factor in the construction of environmental and developmental activities.

The main reason for this is that Latin America has favoured the experimental field of neoliberalism (Bebbington, 2000, Budds, 2004, Perreault and Martin, 2005). Under the conception that Latin America was an underdeveloped region, which needed to increase economic growth, a new economic model was promoted that defined development as a form of capitalism, especially in countries such as Argentina, Brazil, Bolivia, Chile and Uruguay. There was an associated system of unequal power relations and disciplinary mechanisms, and a system of signification based on liberalism and utilitarianism (Escobar, 1988), which laid the foundation for neoliberalism during the second half of the 20th century. In other words, a model that promoted socio-economic homogenisation and the attendant loss of cultural diversity was installed (Bebbington, 2000).

In this broad historical scenario, some political ecologists suggest that a new perspective of development must be elaborated. Using elements of post-structuralism, and to a lesser

extent structuralism, some scholars have started to identify the importance of transforming the region's current conception of development (Bebbington, 2000, Biersack, 2006, Blaikie, 2000, Escobar, 2008). Referring to a diverse range of environmental issues, cultural concerns, and identity they have demonstrated that neoliberalism does not engage with local development perspectives in the definition of human–nature relations (Perreault and Martin, 2005). In so doing, they have given a voice to less powerful groups, keen to redefine the region's agenda.

Environmental conflicts emerge as a key trade-off between different perspectives of development (Martínez Alier, 2003). This is particularly relevant in Latin America, as it is a region where the rapid exploitation of natural resources is considered the main gateway to development, based on a historical model of the extractive economy, which inevitably generates relations of dispossession (Bebbington, 2009, Galeano, 1971, Harvey, 2001). Such a perspective demands economic openness, thereby allowing the entrance of transnational corporations (TNCs), oriented toward natural resource extraction with maximum profit and the all-but-inevitable accompanying environmental impacts, into the region's markets. In turn, it has often generated the resistance of local groups who have cultural roots in the region, and who are usually most affected by this sort of radical economic opening (Bryant, 1992, Perreault, 2003).

Within environmental conflicts, it is possible to see some trends regarding unequal power relations when analysing the shifting economic and political strength of the actors that are involved. While big corporations have embodied the powerful role of global capitalism in seeking market control, local groups have often sought alternatives that respond to global stimuli but safeguard their cultural identity (Bjureby, 2006, Escobar, 2008). Indeed, local groups generally respond to environmental struggles with limited tools, and they are notably lacking in governmental support, as the neoliberal model of development, as well as others, are embedded in legal frameworks and institutions that reproduce strategies and programmes that belittle them. This is the case for numerous laws regarding environmental issues (water, land, energy, among others) that have been developed in Latin America, adversely affecting local groups and exacerbating environmental conflicts (Bauer, 2004, Budds, 2004, Perreault, 2006).

A key factor in this unequal power struggle is the role of Latin American States, which have often legitimised this neoliberal model of development, without assessing its environmental and social impacts. This is despite the State having the potential ability, and indeed moral obligation, to mediate between actors within an environmental conflict in order to safeguard natural resources and vulnerable groups (Bridge, 2000, Leff, 1994, Walker, 1989, Whitehead, 2008). However, some political ecologists have found that in many Latin American countries, there have been governments that, instead of assuming such a protective role, have focused rather on facilitating interventions by foreign companies. Here, only a narrow view of economic utility is considered, in a process that reflects a reductionist view about natural resources and that underestimates the environmental and cultural consequences of those actions (Alicera et al., 1999).

Currently, natural resources and vulnerable groups are still being significantly affected as a consequence of neoliberalism. This is related to the fact that Latin America appears to be a region that is not well prepared to respond to global environmental problems, such as water scarcity, as it has a model of development that segregates local groups, promotes social inequality and growing levels of poverty as well as vulnerability (Geisse, 2007). For political ecology, new perspectives on development arise precisely from being aware of these social and environmental consequences (Escobar, 2008, Gedicks, 2001).

1.2 COMPETING RATIONALITIES WITHIN ENVIRONMENTAL CONFLICTS

This doctoral thesis is shaped by a political ecological perspective, while also being shaped by the view that, in analysing environmental conflicts in Latin America, it is possible to identify how different actors hold often dissimilar conceptions about nature. Actors such as State authorities, big corporations, non-governmental organisations (NGOs) and local groups prioritise elements (economic, political, cultural) distinctly in their idea of development and, by extension, in their conception of natural resources. Such a process notably occurs in relation to specific territories and often leads to a scenario of conflict (Aliste, 2008, Bozzano, 2000, Leff, 1994). Environmental-related conflicts thus define precisely where environmental, economic and societal dynamics overlap as actors assert their claims, often via a struggle among themselves.

A manifestation of this situation can be seen in the dialectic between local and global development. In this sense, within environmental conflicts it is possible to see how local groups may elaborate different practices in order to conserve local practices often rooted in cultural norms and histories. All too frequently they are responding to the implementation of large-scale economic practices by big corporations, which reflect a global ethos of development based on the 'efficient' use of resources (Andolina et al., 2009). It is possible to see in the region a tension between divergent ways of development, since the prevailing neoliberal model tries to 'place' local groups without exploring their community dynamics and strategies, hence only promoting a tension between different rationalities or ways of thinking about social and natural 'realities' (Espeland, 1998).

The role of culture is pivotal to such contrasting rationalities. Indeed, many environmental conflicts show the sheer incapacity of big corporations, as well as State authorities, to incorporate the cultural context of the territories in which their operations are located, implementing development patterns that ignore or denigrate the culture of local groups (Andolina et al., 2009). In this way, instead of promoting an inclusive development model, they install economic patterns that try to redefine, as well as marginalise, the identities of local groups, and thereby do not consider forms of development appropriate to local contexts (Escobar, 2001, Leff, 1994, 2004).

It is thus possible to begin to see how some actors within environmental conflicts base their actions on divergent rationalities about society and nature, and therefore, development. Here logic and 'rational' decision-making are developed in partisan configurations of culture and nature, which are sustained by knowledge systems as well as expectations of future development conditions (Bozzano, 2000, Espeland, 1998). For instance, and as this thesis explores in detail, in the case of many big corporations it is possible to identify specific sorts of rationality that emphasise productivity growth and efficiency, that 'frame' how the social and environmental impacts of their activity are understood, while in local community groups the relationship with nature and territory will tend to be seen in a historical context, in some cases with ancestral notions and associated cultural roots articulated as being beyond the economic interests projected by States and TNCs (Bjureby, 2006, Leff, 1994).

1.3 CONTRIBUTIONS TO KNOWLEDGE AND RESEARCH QUESTIONS

Given the wider concerns of this thesis outlined above, this work will focus on an empirical case involving disputes between indigenous groups and mining companies, broadly reflective of the wider Latin American region over the last 30 years or more. Considering that indigenous groups are usually highly dependent on natural resources, and that mining is typically a high pollution activity that reports huge economic profits, several scholars have focused their studies here on understanding the asymmetry of power and (radically) different perspectives of development within a neoliberal model (Bebbington, 2009, Budds, 2004, Escobar, 2008, Perreault and Martin, 2005, Urkidi, 2010). At the same time, they have analysed elements of social identity, such as gender (Maclean, 2007, Rocheleau et al., 1996, Warf, 2004), class (Harvey, 2001, Smith, 2010) and ethnicity (Blaikie, 2000, Bryant, 2002, Perreault, 2003), in order to identify the genesis of these unequal power relations and competing rationalities, with the aim of promoting inclusive development strategies.

Following this line of research, this thesis addresses questions that notably consider how intergenerational relations may reflect and/or reinforce different rationalities about local development within an indigenous community when dealing with powerful outsiders. Specifically, this thesis assesses the degree to which the Indigenous Community of Chiu-Chiu, in this case study, is internally differentiated according to intergenerational dynamics, regarding their arguments on economic livelihood and development, negotiations with powerful outsiders, and perceptions of community development outcomes. This work will reference a threefold classification schema of Chiu-Chiu's intergenerationality (explained in more detail in Chapter 5) – (1) **ancianos** (elders), understood as the group comprising members who were over 59 years old in 2011; (2) **middle-aged adults**, defined as members of this community who were between 42 and 58 years old; and (3) **the younger generation**, classified as members of the community between 18 and 41 years of age – as it explores the following questions.

In Chapter 5, where the focus is on the collective vision of development: to what extent do Intergenerational Dynamics (hereafter IGDs) shape the key elements of the Indigenous Community of Chiu-Chiu's understandings about local development and their different positions regarding territory? How then do they become articulated when setting out the

community's economic priorities? And considering that the community's ideas about development are elaborated within a wider context, how do such dynamics reflect age-related traditional interests and cultural senses of identity and territoriality?

In Chapter 6, where the focus is on political negotiation with external actors: to what extent do IGDs reflect who has the 'right' to sit at the negotiating table, and how are community demands/aspirations actually articulated to outsiders? How then do IGDs contribute to either community coherence or collective fragmentation when faced with outside interventions/threats? Finally, how do external actors take advantage of any internal community schisms linked to IGDs and with what effects?

In Chapter 7, where the focus is on the subject of perceived costs and benefits of any outcomes of community negotiations with external actors: how might IGDs reflect and reinforce unequal local power relations regarding the distribution of these outcomes? How might gender relations constitute another dimension of unequal distribution of external outcomes? Finally, how far are these dynamics reflected in the 'resistance' to external actors over community inequalities regarding water resource outcomes?

The contribution of this thesis to the research area is thus important for several reasons. First, as mentioned, empirical work that focuses on indigenous people and environmental conflicts is popular in Latin America. In Chile, for example, there are studies related to indigenous communities and mining companies that touch on certain aspects of unequal power relations using a political ecology perspective, as well as the lack of adequate protective legislation and control by the State over natural resources, particularly water (Budds, 2009a, 2010, Urkidi, 2010). Yet this study underscores how neoliberal dynamics regarding water can contribute to redefining local ideas about development, increasing local divisions and generating vulnerability. Through IGDs this research analyses how the Water Code has challenged indigenous communities, and the failure of the Indigenous Law to bond indigenous communities and represent their ancestral claims.

Second, this study seeks to contribute to the development of a more nuanced view of local action via a detailed ethnography of intergenerational relations. In political ecology, a gap can be found in the research when analysing elements that define social interactions, as age and intergenerational relations have not been well studied (Pain, 2005). Therefore, the

role of intergenerational relations as an element of social identity that partly defines social interactions and relations (Hopkins and Pain, 2007), that considers the role of space (Vanderbeck, 2007), and that constitutes a possible key factor of cultural difference (Horton and Kraftl, 2008), is a central focus of this thesis. This thesis analyses, through IGD, the way that external pressure may condition indigenous people's capacity and cohesion in constructing their external negotiations, and how powerful actors can take advantage of differentiations between the age groups.

Third, this thesis reflects on the multifaceted and differentiated nature of resistance that local communities have employed to face modern development, with IGDs at its core. It analyses the way different age groups elaborate discourses and narratives, especially when it comes to dealing with external actors such as State authorities and big corporations. Thus, it explores indigenous people's dynamics, which are useful in analysing the political scenario in Chile, especially as the Chilean government seeks to make the Indigenous Law and the International Labour Organisation 169 Convention (two laws that were developed under democratic governments) 'mesh' with the water and mining legal framework, which was established under a military government shaped by a neoliberalist vision.

1.4 THESIS STRUCTURE

The structure of the thesis is as follows. Chapter 2 elaborates the theoretical framework by developing an approach based on political ecology and its contribution to understanding social and natural engagements. It then discusses issues surrounding competing rationalities, considering how different meanings of nature are grasped by actors, particularly indigenous communities and mining companies, and often embodied in the dialectic between global and local development in Latin America. Finally, it considers intergenerational relations a key element of social identity within indigenous communities, and their possible role in the construction of social relations with external actors over environmental and other issues.

Chapter 3 presents the qualitative methodology used in the thesis. It explains the reason why the Chilean Altiplano was chosen as the study location and why the indigenous community of Chiu-Chiu in particular was selected for the case study. The chapter also

considers the qualitative sources of data generation used in this thesis, notably centred on ethnography and semi-structured interviews. The ethical considerations and challenges during the fieldwork are also noted. In contrast, Chapter 4 provides context for the main empirical chapters that follow. It thus contains an analysis of the indigenous people's role in Chile's water resources management struggles, providing a short analysis of post-colonial water resources management (i.e. since the early 19th century), as well as an overview of indigenous communities in Chile. It also provides background on Codelco (the TNC involved) and its large Chuquicamata project, as well as the Indigenous Community of Chiu-Chiu, who are affected by the project.

The empirical investigation itself is presented in Chapters 5-7. Chapter 5 explores in what ways IGDs shape how an indigenous community articulates its collective vision of development including its sense of territoriality. Chapter 6 focuses on exploring to what extent and in what ways IGDs impact selected negotiations with external actors (notably mining firms and State agencies). Consequently, Chapter 7 builds on this by analysing how far IGDs shape the way that perceived costs and benefits of any results of community negotiations with external actors are disseminated around the community and how far resistance develops thereto.

Finally, Chapter 8 summarises the main findings of the research in relation to the indigenous community of Chiu-Chiu as it confronts the issues of water politics and conflicts over mining. To conclude the thesis, An assessment of the broader implications and possibilities for future research will also be discussed.

CHAPTER 2. THEORETICAL FRAMEWORK

This thesis focuses on how indigenous people generate rationalities in the way that they interact with outsiders within a scenario of environmental conflict. It assesses how community members develop rationalities in their relations/negotiations with big corporations, governments and non-governmental organisations (NGOs) over society-nature relations. The central focus here is to elaborate a framework that analyses the way intergenerational relations may lead to different rationalities of local development within a political ecology perspective.

To pursue this core aim, this chapter sets out a theoretical framework that combines elements from political ecology, human geography and anthropology. It starts with political ecology, analysing its meanings, focus and variations (section 2.1), before considering various selected definitions of nature that are predominantly utilized in the fields of human geography and anthropology (section 2.2). The chapter then explores the dialectic between local and global development (section 2.3), by analysing both post-structuralist and neoliberal perspectives in relation to Latin America (section 2.4). Finally, it analyses the way that indigenous groups and mining companies can be seen to have different territorialities and competing rationalities of nature and local development (section 2.5), and how the role of intergenerational relations in the construction of development and social relations within an indigenous community influences wider political ecology dynamics (section 2.6).

2.1 POLITICAL ECOLOGY: GENERAL APPROACHES

Political ecology is a framework that seeks to define the relationship between the political economy and ecology. It integrates “the concerns of ecology and a broadly defined political economy” as well as “the constantly shifting dialectic between society and land-based resources” (Blaikie and Brookfield, 1987:17), emphasising the “role of political economy as a force of maladaptation and instability” (Walker, 2005:74). Indeed, it suggests a new vision that rejects “apolitical cultural ecology” that places attention on the environment (Biersack, 2006:3) and cultural adaptation (Bateson, 1972, Robbins, 2004), adopting instead a new conception where nature is socially constructed and produced (Bakker and Bridge, 2006, Demeritt, 2001).

Since the early 1980s, political ecology scholars have developed differing perspectives regarding unequal power relations, borrowing elements from dependency theory (Cardoso and Faletto, 1979) and to some extent neo Marxism (Gunder-Frank, 1966). In general terms, political ecology has a special focus on how unequal conditions, in which actors interact over natural resources, shape human and environmental relations (Walker, 2005, Escobar, 2008), advocating “fundamental changes in the management of nature and the rights of people” (Robbins, 2004:5). Indeed, political ecologists analyse human–environment relations by “placing power at the centre of analysis” (Biersack, 2006:3) considering “the ways that natural resources are allocated and managed” (Budds, 2004:325), with a particular interest in vulnerable actors who have economic disadvantages in conflicts regarding access and control of natural resources (Bryant, 1992, Bryant and Jarosz, 2004, Budds, 2004, Escobar, 2008).

Considering unequal power relations as a key factor in the way that actors interact among themselves and with the environment notably implies an analysis of contextual factors. Firstly, it contemplates the role of economic and political institutions within this type of relationship, as they have the potential to shape what activities develop regarding territorial conditions and resource availability (Bridge and Jonas, 2002). Secondly, it considers the “situational rationality” (Blaikie and Brookfield, 1987:13) of specific regions, taking into account “the incorporation of environmental considerations into theories of regional growth and decline” (Blaikie and Brookfield, 1987:17), and the analysis of development definitions of less powerful regions. For instance, the political ecology of developing countries agrees, for the most part, that environmental problems affecting Third World countries are a “manifestation of broader political and economic forces (...) associated with the worldwide spread of capitalism” (Bryant and Bailey, 1997:3).

Against this background of unequal power relations (and multiple discourses), the role of the State grows and acquires the mission to regulate this interaction among actors. Political ecology thus often considers the State as a key actor (Bryant and Bailey, 1997, Peet and Watts, 2004). This is because it has the political power to respond to environmental complexities, while its particular abilities and legal obligations to address conflicts related to natural resources give it a clear role (Whitehead, 2008). Indeed, its policies and initiatives are considered as parameters to control many of the ecological and social ‘side-effects’ of capitalism (Bridge, 2000, Perreault, 2006). Nevertheless, although

the State has a relevant role “within a range of environmental issues at a number of different scales” (Whitehead, 2008:415), when the State answers to contradictions “between forces and relations” (Bridge, 2000:239) and conditions of economic production (Leff, 1994), it does not usually achieve a mediator role as “developer and protector” of the environment (Walker, 1989:32). In fact, it often plays a role in reducing environmental complexity in order to enhance control (Bookchin, 2004). Here a reductionist agenda is revealed, which provides “key institutional contexts” (Whitehead, 2008:415) that benefit some at the expense of others, showing a regulatory homogenisation of socioeconomic patterns without considering local and regional development processes (Swyngedouw, 2004a). Consequently, “the National State became, both in theory and in practice, the pre-eminent and almost naturalised scale through which both subnational and international processes were articulated and understood” (Swyngedouw, 2004a:37). Hence, the State installs its political conception of nature using both consent and coercion (Birkenholtz, 2009); consent, as it engages with “dominant fundamental groups” over ‘appropriate’ human-nature conceptualisation, (Birkenholtz, 2009:211); and coercion, regarding vulnerable and less-powerful groups that get in the way of such conceptualisation.

Since the 1990s, many political ecologists have broadened their view of political and environmental changes as they have begun to be influenced by post-structuralism. The latter notably accepts that reality is “produced discursively” (Biersack, 2006:4) and avoids assuming that meta-narratives are “invariably reproduced” (Blaikie, 1996:81), and hence cannot be questioned and rejected (Blaikie, 1996, Blaikie, 2000, Bryant and Goodman, 2008). Certainly, a post-structuralist agenda has introduced new topics such as gender (Rocheleau et al., 1996, Warf, 2004) and ethnicity (Blaikie, 2000, Bryant and Jarosz, 2004, Perreault, 2003), generating serious debate regarding development theories (Blaikie, 2000), as “voices of other less powerful groups (...) are talked up” (Blaikie, 2000:1037), in the process often questioning elite-defined scientific knowledge as the pre-eminent means of defining human–environmental relations. However, this agenda still remains within a traditional political ecology “which sees imaginaries, discourses, and environmental practices as grounded in the social relations of productions and their attendant struggles” (Peet and Watts, 2004:263). Therefore, structural topics such as class will also be considered, to a lesser extent, as “with the development of social classes, access to nature is unequally distributed (both qualitatively and quantitatively) according to class” (Smith, 2010:61).

Political ecology should be seen as a critical approach notably based in human geography and anthropology that is usually grounded on sustained empirical work. For our purposes, it usefully stresses the importance of both actors and agency in environmental-related conflicts (Biersack, 2006), as well as the possible dissimilarities in the context in which conflicts occur. As Blaikie (2000:1040) states, political ecology considers that “theory and practice in development are always contextual, contingent, and always changing”, and notably assumes that even the way in which nature is conceived is in flux. It assesses how political and economic factors impact the way human groups combine natural and social objects, their symbolic content (Bozzano, 2000, Leff, 1994) and cultural roots (Escobar, 1998, 2008), as well as the way those elements shape appropriations of nature (Aliste, 2008).

In summary, political ecology represents a broad and flexible analytical framework based on a critical conceptualisation of human interaction with nature. It sees human-nature relations as being marked by both conflict and cooperation (Blaikie and Brookfield, 1987, Escobar, 1999, Robbins, 2004), mediated by power relationships (Budds, 2004), and shaped by post-structural dynamics (Biersack, 2006, Demeritt, 2001, Demeritt, 2002). A post-structural political ecology (Forsyth, 2003) in particular allows multiple representations, and analyses the role that key actors play in the environmental field, “as environmental sciences should be understood as inherently politicised” (Budds, 2009b:419). In addition, it opens new subjects and opportunities for new analysis, such as the role of power and gendered environmental struggles (Bryant and Goodman, 2008), as being relativist “does not necessarily mean suggesting no locally grounded ‘truths’ can be found” (Forsyth, 2008:762).

2.2 SOCIAL INTERACTIONS WITH NATURE: A MULTIDISCIPLINARY VIEW

To develop a novel conception on the way social groups interact with nature, political ecology has incorporated cultural elements to better understand this relationship. As Robbins (2004:14) notes, scholars analyse notable scenarios of degradation and marginalisation, environmental conflicts, conservation failures linked to political and economic exclusion, and help to identify environmental-related identity formation based around social movements. Herein, they consider culture as one factor that helps to define

meanings of nature (Escobar, 1999, Latour, 1993) and actors' rationalities (Espeland, 1998), insofar as socio-natural spaces are "historical and constructed" outcomes of human actions (Escobar, 2008:29). Analysing the relation between society and nature in this way (Escobar, 1999, 2008), this field integrates political and economic elements with cultural and environmental subjects (Blaikie and Brookfield, 1987, Bryant, 1992). Hence, political ecology considers the different discourses that actors such as State agencies, NGOs, TNCs (transnational corporations) and others elaborate about nature, as the focus is to understand "the imaginary basis of their oppositions and visions (...) and the discursive character of their politics" (Peet and Watts, 2004:38-39).

There is thus a distinctive perspective on material nature. As Rorty (1981:4) states, material nature is now considered as "irreducibly social, and culturally rooted." It follows that it is necessary to consider the socio-political content as well as the different spatial and scale contexts in which the relations between social groups and nature are performed (Castree, 2001). In other words, nature obtains its meaning from the connotations taken by the various actors, highlighting differences across time and contexts (Budds, 2004), assuming actors' subjectivity (Castree, 2001, Demeritt, 2002) and recognising that materiality cannot be understood only in physical terms (Bakker and Bridge, 2006, Biersack, 2006). In this sense, for political ecology, not only the mutual production of society–nature relations constitutes a central element of analysis (Bakker and Bridge, 2006), but also both the material and symbolic appropriation of territory (Gonçalves, 2001). As Laclau and Mouffe (2001) stated, there is no materiality unmediated by discourse, as well as no discourse unrelated to materiality.

Human geography's role here is important, as it has developed diverse studies on materiality, considering in particular the relations (and reconstructions) between society and nature. Since the 1990s, and the 're-materialisation' of human geography (Bakker and Bridge, 2006), this discipline has been revitalised as a result of its encounters with diverse social and cultural theories, based on critical perspectives such as feminism and post-colonialism, and as a result of the reflexive role and positionality of its research (Knox and Burkard, 2009). In this sense, it has settled on new conceptions of nature, assuming its discourses are as a result of the interaction between "biophysical heterogeneity and social institutions" (Bakker and Bridge, 2006:9), refuting "long-standing assumptions that nature is situated 'outside' of human affairs" (Warf, 2004:48). Therefore, a new social construction

of nature begins, which visualises materiality both as an inconsistent position as well as a reservoir of truth (Demeritt, 2002). An example of this trend can be seen in cultural geography, where scholars understand materiality as a process of "rethinking the object"; feminist geographers, for instance, establish the materiality of the body as a "way to express how subjectivities are shaped by the experience of acting in, on and through the physical body" (Bakker and Bridge, 2006:6).

In this way, human geography acquires a social role within environmental phenomena. This, because it incorporates "practices committed to emancipatory politics within and beyond the discipline" (Jarosz, 2004:920), promoting social changes and assuming the role of a discipline that is critically oriented. Connected with political ecology, such a critical view includes seeing politics as central to an understanding of nature, assuming "there is no one objective knowledge of nature (...), instead, there is only a series of socially constituted knowledge and discourses" (Warf, 2004:48). In this sense, and recognising the limitations of top-down development models such as neoliberalism, human geographers usually emphasise local empowerment through local participation, decentralised decision-making and economic activity built on local knowledge and local control of resources (Perreault, 2008, Zimmerer, 1994).

Work in anthropology similarly provides important insights regarding social groups and their relations with nature that are well linked to political ecology. While early research, dating from the 1960s, tended to see culture only in its role of adaptation to the environment, notably in cultural ecology and ecological anthropology (Biersack, 2006), nowadays, it stresses the analysis of power relations via the articulation and links between culture, nature, politics and development (Escobar, 2008, Biersack, 2006). It "blends theory and analysis with political awareness and policy concerns" (Kottak, 1999:25), as it assumes materiality is a cultural process including in its relation to the use of 'natural resources'.

Complementing scholarship in human geography, contemporary anthropology research incorporates elements "not only to understand but also to devise culturally informed and appropriate solutions to such problems and issues as environmental degradation" (Kottak, 1999:25), assuming that natural resources materiality combines not only physical but also social and cultural elements, showing that meanings and positions regarding nature should

also be considered in social terms (Orlove and Caton, 2010). In this framework, Mauss (1990:3) is indeed a pioneer, as he considers water resources to be "total social phenomena", something that Orlove (2010:403) demonstrates empirically by arguing that quantity and quality of water "are always experienced as social constructions", so they cannot be known and recognised only for their physical condition. Therefore, Orlove (2010:404) states that "any anthropological analysis (...) ought to be concerned with five principle themes: value, equity, governance, politics, and knowledge", which means that considering water as a social fact requires an examination of the value assigned to the resource and its distribution, as well as its governability and political facts.

Applied to the materiality of consumption and production during the last two decades in anthropology, and recently in human geography, culture has been reinforced as a central analytical element that helps to constitute social relations. In this way, building on the statement that "social words are as much constituted by materiality as the other way" (Cassell and Symon, 2004:3), both disciplines have incorporated materiality, in reference to commodities and objects, as "physical constituents of sociocultural practice" (Bakker and Bridge, 2006:12). In other words, conceptualisations of materiality shift from the neutrality of artefacts to the role of objects in the constitution of social relations (Knox and Burkard, 2009), establishing a new focus on both the role of things in constructing social reality and the meanings embodied by commodities (Bakker and Bridge, 2006). Consequently, both disciplines have started to analyse the importance of contextual representations as the "ways in which meanings are interpreted or consumed are not necessarily how they are produced" (Warf, 2004:48), thus valuing differences and treating culture and nature as "fully historical and constructed" (Escobar, 2008:29).

For our purposes, then, research in political ecology, human geography and anthropology is connected via sophisticated analysis of society–nature relations. This fruitful interaction has enhanced the scope and power of political ecology. It has benefitted from recent work in cultural geography and new conceptions of materiality, while it has drawn from anthropology an understanding of the role of culture as a key factor in the way social groups represent their environment and constitute their visions of development alongside a politics of change.

2.3 DIALECTIC BETWEEN GLOBAL AND LOCAL DEVELOPMENT

For this thesis, literature that explores the dialectic between local and global development is also a major concern. Development is not a new concept and has indeed always had different connotations over time and space and among different actors. In relation to environmental matters, discourse regarding development began in the 1970s, specifically in the context of the United Nations Conference on the Human Environment held in Stockholm in 1972. During the 1980s, the World Conservation Strategy and the World Commission on Environment and Development continued using this notion as the main label for a “global agenda for change”. Consequently, in the 1990s, particularly due to the United Nations (UN) Conference on Environment and Development held in R  o de Janeiro, sustainability entered as another label to complement this idea of change, elaborating a new discourse which explicitly considered environmental dimensions to be integral to development (Adams, 2009).

In this sense, this thesis offers a critique of this ‘global’ idea of development by articulating discourses, and social and cultural relations, attempting to represent various realities (Adams, 2009). The idea of development as “a process of expanding the real freedoms that people enjoy to lead the lives they have reason to value” (Sen, 1999:3) inevitably includes dominant assumptions about society and nature, and the political economy that gives viability to new discourses, such as sustainable development (Redclift, 2002). Indeed, considering the present visibility of ecological degradation, “the reconciliation of economy and ecology (under the umbrella of sustainable development) is intended to create the impression that only minor correctors to the market system are needed (...) without substantial reform” (Escobar, 1996:330).

With the incorporation of environmental issues into developmental discourses, new ways of handling environmental problems have been devised. The historical links between development and environment emerge as an early political ecology topic of research, demonstrating Blaikie’s (1985:138) “desperate ecocide” where political dimensions of natural resource usage shape socio-natural patterns. At the same time, Adams (2009) suggests that a multidisciplinary initiative should be the solution to comprehend the phenomena involved. Yet such an outlook faces challenges, notably because modern economic rationality does not consider “cultural values and ethnic identities within local

communities" (Leff, 1995:1) in its calculus. An example of this problem is seen in the early 1990s with the publication of the so-called Dublin Principles, which tried to link development with water scarcity, considering water resources as both a basic right for all human beings and as an economic value (Bauer, 2004). Yet these principles were fatally weakened because they did not define specific guidelines that States should follow, thereby generating conflicts between global and local actors.

Specifically *global* discourses of development have the capacity to define strategies and plans with different nuances as they are 'grounded' locally. As Cowen and Shenton (1998:50) state, it is possible to identify development "as an immanent and unintentional process" or as an "intentional activity". While unintentional development has to do with changes regarding political, economic or cultural phenomenon, intentional development is oriented to a group of development programmes and plans carried out with a specific end (Bebbington, 2004). In this way, we can identify the critique that political ecology has long made concerning neoliberal development (Adams, 2009, Blaikie, 1985, Escobar, 1988, Peet and Watts, 1996), since "relations between industrialized nations and Third World countries (since the end of World War II) have been greatly determined and mediated by the discourses and practices of development" (Escobar, 1991:658), reinforcing ethnocentric and 'First World' dominant models of development. Nevertheless, nowadays, emerging market economies have started to play an increasingly important role in global economic development, particularly in the BRIC countries (Brazil, Russia, India and China), as they are among the largest countries in the world and dominate the developing market economies, showing a different trend from the others (Gammeltoft, 2008, Jensen and Larsen, 2004).

The dialectic between global and local development is a dynamic and continuous process, as local groups have to respond to a regular stream of global stimuli and extractions. However, this is not only a one-way global/local vector, as space is a product of interrelations, and therefore it should be recognized "as constituted through interactions, from the immensity of the global to the intimately tiny" (Massey, 2005:9). Indeed, it is the sphere in which different trajectories coexist "(...) [and] is always under construction" (Massey, 2005:9). Regarding indigenous groups, Andolina et al. (2009:7) state that they "negotiate, contest, or collude with powerful (outside) forces and actors" suffering important consequences for their agendas as "transnational networks increasingly move

from coordinating to governing.” Therefore, it is possible to see a “range of responses to globality” (Escobar, 2008:1), as local groups have specific knowledge about development, sustained by their vision of nature, which “constitutes sophisticated frameworks that can be no longer overlooked in any discussion of globalization, whether from an economic, cultural or ecological perspective” (Escobar, 2008:2).

Hence, culture acquires a relevant role when analysing the dialectic between global and local development. In particular, analysing cultural patterns helps to assess if ‘globalisation’, that is, “localization processes that are informed or driven by globalization processes”, includes “culturally appropriate development” in the context of local agendas or whether it consist of development that appropriates their culture (Andolina et al., 2009:3). In this sense, studying to what extent and in what ways local groups use particular facets of ‘globalisation’ as a tactical means to access political opportunities as a community strategy (Escobar, 2001, Urkidi, 2010) helps us to understand both their position on local development as well as their willingness to negotiate with outside actors.

Within this framework, NGOs often have an important role to play in providing support and visibility to particular local groups. NGOs help promote the visibility of particular indigenous places and spaces, while others remain invisible (Mercer, 2002). Thus, NGOs may provide empowerment, influencing development for local indigenous groups through initiatives and practices of environmental protection, even though outcomes may be ambiguous (Young, 2001). They have the potential to help indigenous groups increase their social, cultural, symbolic and economic capital, expanding their networks from the local up to the global, as well as enhancing their knowledge, legitimacy and, sometimes, even their wealth (Bryant, 2005).

In this context, Latin America plays a special role globally, considering its sizable indigenous population (as a proportion of the total regional population) and the many conflicts that it has suffered in this arena (Escobar, 2008, Gedicks, 2001). This is because many projects in this region are “based on narratives that were embodied in transnational notions of modern progress” (Andolina et al., 2009:12) without considering national or local identities and cultural roots. Therefore, it is possible to identify a tension between “homogeneity and diversity” permitting an “equality and inequality” (Wade, 2004:264) ethos that affects social groups, particularly indigenous people, differently. In other words,

these projects in their 'global' scope often contain a reductionist vision about nature that subordinates other localised visions of nature to the laws of the market (Leff, 2000).

In short, to understand the scenario whereby competing rationalities are generated, it is very important to analyse the dialectic between global and local development in its material and discursive elements. Thus, it is possible not only to comprehend the differences between local groups and other actors (at the regional and national level) but also to identify how global projects involving natural resources and local development influence the way indigenous groups define their "identities' agendas between being made by others and being elaborated by indigenous people themselves" (Andolina et al., 2009:9). Indeed, this dialectic provides a framework in which different rationalities succeed or fail and demonstrates which historical 'facts' are relevant to local development, as well as the way 'globalisation' has been understood and utilised by different generations within indigenous communities.

2.4 POST-STRUCTURALISM AND NEOLIBERAL PERSPECTIVES IN LATIN AMERICA

Considering the aforementioned dialectic between global and local development, political ecology has sought to question ideas of development that are solely associated with economic indicators and variables. Influenced by post-structuralism, it considers the multiple discourses and ways in which groups interact with nature, thereby underpinning the idea that development projects always reflect and enforce established power relations, while usually not acknowledging local approaches and cultural differences (Escobar, 1988, 1991, 2008, Peet and Watts, 2004). Some political ecologists also stress that the State does not act as a neutral mediator between human groups and nature, as it provides the appropriate institutional framework for economic practices and support for free markets (Harvey, 2007). In this sense, for various scholars, neoliberalism constitutes a State-coordinated economic paradigm that promotes a purely economic view of nature and local development (Bauer, 1998, Bebbington, 2000, Budds, 2004, Perreault and Martin, 2005, Perreault, 2006). Although, in much of the literature, the effects of neoliberalization are generally assumed to be negative, some scholars (Bakker, 2009, Castree, 2008a, 2008b) have argued that neoliberalism is heterogeneous, going beyond oversimplified understandings. Thus, assuming this variegation "suggests the possibility that outcomes may be positive as well as negative in specific geo-historical contexts" (Bakker, 2010:728).

Latin America appears as a crucible in which powerful unequal relations have empirical ubiquity and political relevance. This is mainly based on the fact that a neoliberal view of development (Perreault and Martin, 2005, Perreault, 2006) was established in the region (starting in the 1950s in some areas) and that the World Bank is a powerful actor promoting neoliberal practices in the region as a whole (Bauer, 1998, Escobar, 1988). This view suggests “that human well-being can best be advanced by the maximization of entrepreneurial freedoms (...) characterized by private rights, individual liberty, free markets and free trade” (Harvey, 2007:2), promoting a paradigm of development that assumes that private ownership of natural resources increases economic efficiency “allocating resources to their most valuable uses” (Bauer, 1998:10), and, therefore suggesting that “opening up natural resources to private exploitation and facilitation of foreign direct investment and free trade” is invariably a good thing (Harvey, 2007:6).

While it is true that Latin America has witnessed more interventionist regimes over the post-World War II era, influenced by Raul Prebisch and the ECLAC (Economic Commission for Latin America and the Caribbean) School, particularly the import-substituting industrialisation (ISI) approach, which was broadly developed within the dependence theory framework and emerged as an alternative to modernisation theory in the region (Haug, 2001), nonetheless neoliberalism flourished after 1979. In Chile in particular, this programme was implemented by the so-called Chicago Boys (Chilean neoliberal economists who studied at the University of Chicago, the ‘spiritual home’ of neoliberalism), who developed the 1980 Constitution under the dictatorship of Augusto Pinochet. In general terms, this Constitution (still valid today) “expands and fortifies private property rights and economy liberties while limiting the state’s economic activities to a subsidiary role” (Bauer, 1998:114).

Within the Chilean Constitution, the 1981 Water Code showed an extremely neoliberal position, which has drawn the attention of multiple scholars in the area (Bauer, 2004, Budds, 2009a). For instance, this Code states in Article 6 that uses of water are the “domain of its owner, which may use, hold and dispose in accordance with the law” (Justice Ministry, 1981). Furthermore, Article 13 gives licence to owners “to fully consume water in any activity” (Justice Ministry, 1981). In addition, indigenous policies developed by both the Institute of Agricultural Development (INDAP) and the National Corporation for

Indigenous Development (CONADI) to confront the consequences of water scarcity in the northern Chile, under Law 19.253 (See Chapter 4), “have been mainly oriented towards promoting a more efficient use of available water (e.g. preventing water leaks and losses), rather than towards promoting a status quo that is less profoundly detrimental to the lives of indigenous communities” (Molina, 2012:102).

In a Latin American context, as well as in Third World countries overall, political ecology has criticised neoliberalism as a paradigm of destructive development. Using particular elements of post-structuralism, political ecology has recently established the importance of “valuing difference” and considering the “different notions of value and of valid knowledge” (Bebbington, 2000:497). In other words, with the ‘cultural turn’ within the social sciences and the emergence of post-structuralism in disciplines such as human geography and anthropology, some political ecologists have started to emphasise discourse analysis, integrating it with Marxian analysis focusing on identity and cultural politics (Perreault, 2008). This work stresses the homogenising effects of neoliberalism (Bebbington, 2000), presenting it as a reductionist view of natural resources and human groups, criticising its purely economic logic (Costanza et al., 1999, Garces, 2005) as well as its “particular ethnocentric notion of what is to be developed” (Bebbington, 2000:498).

Indeed, a number of political ecologists (Budds, 2004, Perreault and Martin, 2005, Urkidi, 2010) have started studying privatisation as the main component of neoliberalism, trying to identify “new ways of power relations between different actors” (Budds, 2004:325) and its role in the reconstitution of society and nature. This is because they understand that privatisation has become “the central mode of regulating multiple forms of nature” (Mansfield, 2007:393). It involves turning nature into commodities and devising a rationale that permits complete control of natural resources, “including the ability to exclude others from using it” (Mansfield, 2007:399). Studying privatisation in this way allows private property of natural resources to be seen as a form of protection for its owners, but as a form of violence for those who do not have access to resources (Mansfield, 2007), modifying the relations between social groups and nature, and exacerbating unequal power relations over natural resources.

Thus, the field of political ecology has produced critiques of development in general (Escobar, 1988, 1991, 2008) and its current neoliberal variant in particular (Bauer, 1998,

2004, Budds, 2004, 2010). While neoliberalism professes to promote the allocation of resources in the most 'efficient' way, post-structuralism seeks alternatives in the cultural and political activities of local actors (Bebbington, 2000). In a sense, the post-structuralist critique of the cultural homogenisation of neoliberalism is about neo-colonialism: Northern interests asserted in Southern territories (Escobar, 1988, Escobar, 1991), as well as fighting the "subordination of different modes of thought and interpretation" (Becker and Geer, 1957:274). This critique reproaches not only the neoliberalist assumption about human-nature relations, "which seeks technical and regulatory solutions to environmental problems" (Klooster, 2003:113), but also the negative impacts that this system has on less powerful actors, as "development is not necessarily good; it depends on who you are" (Adams, 2001:369). In other words, it critiques the way that developed countries, within a framework of capitalism and industrialisation, have articulated a "fictitious construct: (underdevelopment)" (Escobar, 1988:429) involving an economic view about development that introduces new patterns, programmes and planning that affect social relations as well as cultural content (Escobar, 1988).

In this way, political ecology uses post-structural elements to give greater importance to local views on nature and development. This is because it assumes that the role of culture forms the basis of the way in which discourses are generated and, thereby, the way that practices are constructed (Escobar, 1988, Escobar, 1991). Therefore, many political ecologists working in Latin American countries, such as Escobar (1988) in Colombia, Perrault (2006) in Bolivia, Swyngedouw (2004b) in Ecuador, Budds (2004) and Urkidi (2010) in Chile, among others, have started to question the exercise of power embodied in projects within the neoliberal paradigm.

2.5 DEFINITIONS OF NATURE: TERRITORIALITIES AND COMPETING RATIONALITIES

When scholars have studied diverse Latin America settings, they have stressed the different definitions of nature, usually those adopted by the indigenous groups and mining companies. Indeed, the relationships between these actors appear to exemplify the way actors interact over territory and the consequences of neoliberalism in the dialectic between global and local development.

Considering the production of the relation between culture and nature, as well as political, economic and cultural constructions (Bakker and Bridge, 2006) political ecology emphasises an approach based on the “complexity of relations (...) that account for particular configurations of nature and culture” (Escobar, 2008:29) and on the way different actors elaborate their interests and concerns via assertions of territoriality (Aliste, 2001, Bozzano, 2000, Gonçalves, 2001). For instance, in the relations between indigenous groups and mining companies, it is possible to see how both groups typically hold dissimilar positions in the way that they rationalise their relations with nature.

It is for this reason that a political ecology of competing rationalities plays a special part in this analysis, particularly within environmental conflicts. This has to do with the fact that in these circumstances the actors’ vital differences become visible in their practices based on materiality, spatiality and temporality (Leff, 1994), thereby often demonstrating their differing values and meaning systems (Aliste, 2001, Aliste, 2008, Bozzano, 2000, Leff, 1994). Therefore, although ‘factual’ laws and regulations for natural resources industries exist, there are currently cultural and socio-natural conditions that include different ways of understanding production and consumption relations. Different actors show distinctions in the way they understand legislation and establish “ethical” practices beyond the law. For example, it can be seen how Social Corporate Responsibility programmes include social, cultural and environmental practices that are not considered “official”, yet can powerfully condition local practices (Bridge and Jonas, 2002).

The role of territoriality is often pivotal in grasping how social groups and nature interrelate. Territoriality is to be understood as a conceptualisation and signification of space (Aliste, 2008, Bozzano, 2000) that is not limited to a physical context, as it includes a whole disposition of geographic, natural and social objects (Aliste, 2008, Bozzano, 2000, Storey, 2001). As Gonçalves (2001) argues, territoriality involves different perceptions and distinctions within the socio-natural dynamic, thereby serving as a manifestation of a rationality linked to representations and appropriations of nature including material and symbolic contents.

Empirically, territoriality can be seen in the way that indigenous groups and mining companies interact between themselves and with nature. In this regard it shows how both actors have an appreciation of territory that is partially defined by geographical meanings

that allow them to interpret the same territory in different ways, mediated by their own particular knowledge systems and expectations (Bozzano, 2000). Moreover, seeing territoriality as one part of the argument in this case leads, in turn, to seeing how actors struggle over defining the set of meanings that constitute place, seen as an “important source of culture and identity” (Escobar, 2008:7). In fact, indigenous groups develop multiple forms of resistance that “revolt against being conducted in a certain way” (Foucault, 2007:xx) and that exist within a strategic field of power relations in both internal and external relations.

Competing rationalities often result in social tensions over territory. They arise because actors have different “patterns of selection and exclusion” and “consequentialist logic” that do not follow the same path and are “causally connected to carefully defined future states” (Espeland, 1998:223). However, although this includes a ‘rational’ decision that “stops the flow of life, imposing on it coherence (...) and strict rules of relevance” (Espeland, 1998:223), it also considers social elements that are the axis of their appropriation of nature (Leff, 2004). This is particularly important as neoliberalism implies a relationship with nature that involves an economic rationality sustained in a specific method of production and consumption (Bryant and Goodman, 2003, Leff, 1995), promoting an instrumental homogeneity sustained in economic ‘facts’.

As this thesis explores the relations between one indigenous group and one mining company, it is possible to see different rationalities and their proximity to an economic axis of practice. On the one hand, indigenous groups tend to promote a socio-natural rationality focused on their cultural, social and economic values professing ancestral relations between culture and nature (Bjureby, 2006), and mainly base their rationality on a system of meanings and cultural norms linked to local diversity (Leff, 1994). On the other hand, mining companies usually have developed a rationality that is firmly based on a profit-driven capitalist view of natural resources. This rationality, as Leff (1994) argues, is based on an economic, political and technological dominance and legitimacy that emphasises ‘productivity and efficiency’, privileging scientific knowledge in a way designed to reduce the influence of other types of knowledge (Morin, 2001).

As noted, the examples above demonstrate the vital differences that indigenous groups and mining companies often seem to hold about nature and development. In this way, both

actors' territorialities and rationalities become visible when the specific regimes of practice based on materiality, spatiality and temporality are analysed and when the values on which they base their meaning systems are observed (Leff, 1994). This demonstrates the way that actors both design and articulate environmental "knowledge and representation" (Zimmerer and Bassett, 2003 :3) in pursuit of wider societal claims.

2.6 INTERGENERATIONAL ANALYSIS WITHIN AN INDIGENOUS COMMUNITY

While indigenous groups and mining companies usually seem to have different territorialities and competing rationalities, it is also important to assess if *within* an indigenous group it is possible to identify differences. Therefore, this thesis also assesses intergenerational relations or 'intergenerationality' in order to understand if these types of intra-community dynamics may contribute to differences over or reinforce a unified vision of nature and local development within an indigenous community. This particular aspect of community relations is especially relevant to the aims of the thesis because intergenerationality may influence the rationality of an indigenous community regarding local development, and their openness to negotiate with other actors. As this constitutes an element of social identity, it contains relations which are produced within cultural differences (global and local), and contemplates the role of space as an extension of discourses and cultural practices (Hopkins and Pain, 2007, Horton and Kraftl, 2008, Vanderbeck, 2007).

Although intergenerational relations cut across all disciplines of the social sciences, there is relatively little research relevant to the concerns of this thesis. Indeed, several scholars have argued that intergenerationality is an issue that has not been well studied (Vanderven, 2011, Walker, 1996), particularly in the examination of identity as a result of intergenerational relations in social groups at both the micro and macro level (Edmunds and Turner, 2002, Pain, 2005). In other words, despite the seeming importance of intergenerational relations in understanding cultural change, it has not yet played an important role in the development of sociological theory (Edmunds and Turner, 2002), and still lacks a conceptual framework capable of interfacing with other disciplines (Vanderven, 2011). Nevertheless, considering generations as a more appropriate division than chronological age "for defining and examining at different life stages" (Smith et al.,

2009:86), the interest in intergenerational relations has increased in recent years as scholars begin to appreciate its explanatory potential.

Insofar as work has been done, geography has tended to focus on particular stand-alone age groups. In this sense, it has incorporated the study of age, with a special interest in childhood and young children and, to a lesser extent, in the elderly, showing thereby a tradition of "fetishizing the margins and ignoring the centre" (Hopkins and Pain, 2007:287). Although age is assumed to refer to a biological reality (Hopkins and Pain, 2007), geography assumes that "the meaning and experience of age, and the process of ageing is subject to historical and cultural processes (...) both youth and childhood have had and continue to have different meanings depending on young people's social, cultural and political circumstances" (Wyn and White, 1997:10). Nowadays, geographers understand that intergenerational relations help to dismantle rigid categories regarding age, such as childhood or old age, examining families' and communities' interactions in a broad spectrum, including local and global scales (Smith et al., 2009).

Within analyses performed by geographers, intergenerational relations occasionally appear as one aspect of social identity formation. Several scholars have pointed out that intergenerationality refers to relations and interactions between generational groups (Antonucci et al., 2007, Hopkins and Pain, 2007, Walker, 1996) and that this phenomenon constitutes an aspect of social identity since an individual's and group's sense of such identity is elaborated partly based on generational difference and sameness (Edmunds and Turner, 2002, Kerns, 2003, Pain, 2005). They thus consider that identity, not only of children but of other groups too, is produced as a result of interactions with other age/generational groups in a dynamic way. As such, "the variability of intergenerationality" appears as a relevant arena of research for geographers (Hopkins and Pain, 2007:289), which has been focused, at different levels, mainly on points of crisis or conflict rather than on cohesion or hope (Hopkins and Pain, 2007).

Indeed, it could be argued that the process of intergenerationality carries different patterns that define social interactions. As Pain (2005:10) argues, intergenerational relations "form part of our identity or social make-up (...) affecting how we use local spaces (and our opportunities) to take part in public life". Thus, there is a perspective that considers intergenerational relations as a "frequent target of critique" (Vanderbeck, 2007:201), as

they contains power relations between different actors, particularly adults and younger people (Aitken, 2001). For instance, younger people, particularly in minority groups, feel "increasingly restricted, controlled and surveyed (...) (and) find their physical, social, cultural and psychological spaces increasingly eroded and circumscribed" (Maxey, 2004:30).

As with gender, class and race, intergenerationality can also be identified in terms of produced relations. Indeed, "intergenerational relations are produced by a complex range of factors at individual, family, community and societal levels" (Pain, 2005:10), such that members of social groups often develop specific patterns related to age, mainly based on the expectation to "act your age" (McHugh, 2000:106). In this sense, Butler (1987) states that the effects of ageism and age discrimination should be considered as similar to the effects of race and gender discrimination, as they influence and redefine roles in society. For instance, the studies developed by Biggs (1996) regarding 'elder abuse' within social policies in the British context, demonstrate how old age is thought of as a time of increasing incapacity, affecting the type of services provided, which promotes dependency instead of rehabilitation (Wilson, 1991), weakening the role of this age group in society.

With these concerns, writing on intergenerationality invites political ecology and other such fields to consider how this factor may be a key to analysing cultural differences and dynamics. As intergenerational relations are produced at different levels, in an era of globalisation "the mobility of individuals and families within and beyond national boundaries" (Izuhara, 2010:3) means that a new and more complex assessment of these types of relations must be performed. Although there are researchers who consider that "generational differences can be ascribed to much more powerful, cross-cutting differences" (Horton and Kraftl, 2008:285), there are others (Chant and McIlwaine, 1998;, Katz, 2004) who emphasise that generational patterns spark the geographer's interest when analysing local cultural differences within global contexts. Such differences may relate to how relations between generations can give sustainability to community values while "the high esteem in which they hold the elderly" may constitute a key source of continuity amid wider change (Oduaran and Oduaran, 2004:174). Therefore, political ecology has an opportunity to complement human geography's analysis of culture, incorporating a fresh political and ecological view about this local and global dialectic via the prism of intergenerationality.

Further, it is essential to assess the role that space may play in relations between generational groups. This is because age is considered as an "unspoken spatial extension" (Vanderbeck, 2007:206) as it constitutes and establishes particular places that can be used only by specific social groups considering generational factors (McHugh, 2000). As Vanderbeck (2007) states, discourses of emplacement linked to age-based identities generate implications in terms of intergenerational relations, because segregation practices may occur as different actors assert their appropriation of space. Thus, intergenerational relations are considered geographical phenomena (Christensen and Prout, 2003) that include "spatial discourses that construct particular spaces" (Vanderbeck, 2007:205), recognised by geographers as a very powerful element that helps to structure their relation to nature. For instance, regarding language, generations that use language differently in terms of their time and social space, may redefine their perceptions and behaviour in everyday life (Mphande, 2004).

In summary, intergenerationality appears as a potentially useful concept that helps us analyse the different rationalities and territorialities that community members have about their relation with nature as well as their relation with other actors in light of age differences. Thus, relations between generational groups contain aspects of social identity and special elements of culture and space that allow an analysis that shows if the rationality that members of an indigenous community have about nature and local development varies or is differentiated due to age. Here, the concept of intergenerationality builds on a political ecology vision of unequal power across social relations and socionatural dynamics, as discussed above.

2.7 SUMMARY

This chapter has set out the theoretical framework of the thesis by documenting key conceptual themes and issues notably centred on unequal power relations and competing rationalities. This framework comprises a political ecology perspective regarding intergenerational relations within an indigenous community in order to investigate how intergenerational relations may reflect and/or reinforce different rationalities about local development within an indigenous community when dealing with powerful outsiders.

The concepts and ideas discussed in this chapter in turn frame the empirical issues of the thesis. Thus, this and the following chapters, setting out the methodology (Chapter 3) and empirical context (Chapter 4) of the thesis, the three main empirical chapters, explore the political ecology of negotiated rationalities and politicised identities in relation to Intergenerational Dynamics (IGD) over water and mining issues in Chiu-Chiu. Chapter 5 explores culturally based rationalities about local development and the role IGDs may play in their articulation. Chapter 6 relates the negotiations of members of this community with external actors, and to what extent and in what ways IGDs impact on them. Chapter 7 builds on that discussion by studying to what extent IGDs shape the perceived costs and benefits of how any outcomes of community negotiations are distributed around the community. The utility of the thesis's theoretical framework is finally considered in Chapter 8 in relation to key research findings and possible future research themes.

CHAPTER 3. METHODOLOGY

The aim of this chapter is to explain the methodology of the thesis. Specifically, it describes why the water conflicts in the Chilean Altiplano were chosen as the study context (section 3.1), as well as the relevance of the case study approach, and the Indigenous Community of Chiu-Chiu in particular (section 3.2). The research develops a qualitative research design and as such it includes some practical research issues concerning definitions, characteristics, and ethical considerations undertaken in the research (section 3.3). The specific types of qualitative methods used in the generation of data (section 3.4) and the framework of analysis (section 3.5) are then described. Space is finally given over to reflections on the fieldwork experience in light of the work undertaken (section 3.6).

3.1 WHY WATER CONFLICTS IN THE CHILEAN ALTIPLANO?

To understand the main reason why water conflicts in the Chilean Altiplano were chosen as the study context, it is relevant to briefly discuss why Chile is a country highly vulnerable to climate change. As a study published by the University of Chile (2006) shows, there will be an increase in temperature in all regions of the country, but these issues are expected to be more intense in the Andean regions. Also, there is expected to be accelerated glacier retreat in Chile, as well as in other South American countries, with negative effects in terms of irrigation and other end uses, and a precipitation decrease in certain areas, increasing water scarcity (UNEP, 2005). The Chilean Altiplano in particular, comprised of barren and semi-arid zones, appears to be susceptible to deforestation, erosion, disasters and drought (Olmo, 2007).

Therefore, indigenous communities located in this zone, and who are primarily engaged in agriculture activities, have become one of the more vulnerable groups. This is because they often have enormous difficulty already in accessing reliable water resources, as the Chilean legal framework since 1981 has not recognised indigenous communities as “water-rights holders, in spite of their long history of using water” (Boelens and Zwarteveen, 2005:748). As indigenous water rights were considered to be “unused rights” (Boelens and Zwarteveen, 2005:747), they were quickly allocated to other sectors that presented an official request after 1981, dominantly mining, given its prominent economic

role in the country. The result was the initiation of fierce competition over access to water resources.

Water conflict in the Chilean Altiplano is therefore a methodologically relevant study context, as it shows empirically, under a scenario of climate change, the consequences of the Chilean water framework on indigenous communities, and how the impact of mining and the lack of regulation of water markets have produced water scarcity and contamination of watercourses in local communities (Gentes, 2003, Orrego, 2002). Indeed, it is an ideal context in which to explore unequal power relations between indigenous communities and mining companies, as well as the lack of adequate socially-minded legislation by the State in terms of natural resources. At the same time, this case study allows an examination of contrasting positions and competing rationalities that these actors appear to have when environmental, cultural and social issues are combined in a region deeply affected by water scarcity, and is mindful of how intergenerational relations may be a key element in communities subject to rapid change.

Thus, the Chilean Altiplano was chosen as the study context because it enables an empirical exploration of the relations between indigenous communities and mining companies in a water conflict, and the role of intergenerational dynamics (hereafter IGD) in negotiations about local development within an indigenous community. These concerns are situated within the broader conceptions considered in Chapter 2.

3.2 CASE STUDY APPROACH

This thesis uses a case study approach for the analysis of water conflicts in the Indigenous Community of Chiu-Chiu. According to Yin (1994:13), a case study is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context”. The case study is used as a framework rather than as a specific method, as it explains the way something happens by analysing in detail the interrelationships of the case being studied (Thomas, 1998). Consequently, this case study was considered in light of theoretical influences (Chapter 2) and the research concerns developed in Chapter 1, which guided the research methods used, as well as the decisions about what data was relevant to collect during fieldwork (Laws et al., 2003).

Using a case study requires an analytical approach to connect empirical data with the theoretical framework (see Chapter 2). There was therefore a logical progression connecting the fieldwork data with the initial research questions and leading to the conclusions. The research design encompassed study questions, theoretical influences and propositions, a unit of analysis (the Indigenous Community of Chiu-Chiu), and criteria for interpreting the main results (Yin, 1994), with the purpose of building “a very convincing case based on theoretical generalisation” (Laws et al., 2003:345) and exploring how theory works in practice, where theory is akin to “a guess about what is happening in the world” (Laws et al., 2003:345).

For the case study approach presented here, qualitative methods were considered the most appropriate (see section 3.3), as they allow a “way of getting close to the data and studying social interaction in its natural surroundings” (Gilbert, 2001:33), along with a research strategy that emphasises the collection and analysis of data in terms of words and meanings.

3.2.1 Single case study

This research specifically focuses on a single case: the Indigenous Community of Chiu-Chiu. The main rationale for using a single case was the ability to “represent a critical case in testing a well-formulated theory” (Yin, 1994:38) that met all the conditions for testing the theory. Intergenerational relations were used to compare ‘how’ and ‘why’ different members of the community perceive mining companies, water rights, and the like, as they do, as well as how this affects their negotiations with other actors such as the big corporations and State authorities.

Based on points raised by Yin (1994) and Thomas (1998), there were three main reasons why the Indigenous Community of Chiu-Chiu was chosen for the single case study. First, this community represents a critical case, as it allows theories to be tested on power relations and competing rationalities of a community located in a mining district which is struggling against State authorities and mining companies over of the distribution of water rights. Second, it is a revelatory case, in that it enables access to information on which there are no previous studies. Although the Indigenous Community of Chiu-Chiu lost the right to a vast amount of water from the Loa River with the application of the Water Code

in the area after 1984, there has been no information about how or why members of the community adopted their particular positions, the different actors involved, or the consequences of this law. Finally, this was a suitable choice for practical reasons, since the Indigenous Community of Chiu-Chiu was easily accessible from my base and home in Santiago, and also because I knew the community and its leaders well, through previous studies I had undertaken there. In 2008, I worked on citizen participation and assembly meetings in the Chilean Altiplano regarding mining projects and water rights on behalf of the Casa de la Paz Foundation. I had also previously performed research in Chiu-Chiu village during the spring of 2009 for my MA dissertation (based at the University of Chile), examining the tension between the Mining and Water Codes over the indigenous concept of territoriality. Therefore, during the winter of 2011, I undertook preliminary fieldwork there with the aim of determining whether the community was suitable for this research project, and concluded that it was.

This research incorporates different levels of validity. The construct validity of this research, understood as “establishing correct operational measures for the concepts being studied” (Yin, 1994:33), is achieved through the use of multiple sources of evidence, such as ethnography, interviews and documentary analysis, focusing particularly on the research questions, and allied theoretical concerns. It thereby acknowledges the triangulation process “looking at the same issue in different ways, collecting data of different kinds from different people (...) as a more convincing picture can be built up” (Laws et al., 2003:348).

To enhance internal validity, which means that “the research design can sustain the causal conclusions that we claim for it” (de Vaus, 2001:27), this thesis develops a strategy of “explanation-building” (Yin, 1994:110), analysing the case study by building explanations (Yin, 1982) of the causal links. Based on Yin (1994), this research therefore contemplates an initial set of theoretical concerns that are constantly compared with the findings of the case study, repeating the process as many times as needed to give consistency to the work and increase its internal reliability (Bryman, 2004).

To enhance external validity, that is “the extent to which results from a study can be generalized beyond the particular study” (de Vaus, 2001:28), this research is rooted in theory that aims to analyse how and why things happen as they do (Laws et al., 2003), in

order to facilitate research generalisations. To assist this process, descriptions were given of the people under study (protecting anonymity, see below) how they were selected, the methods of data collection and the data analysis techniques, so that future researchers may be able to make informed decisions about the research (Johnson, 1997).

3.3. QUALITATIVE RESEARCH

As mentioned, qualitative research constitutes the main strategy for this case study, comprising several specific methods.

3.3.1 Definitions and characteristics

An inductive approach was used to study the water conflict and community dynamics at the heart of this thesis, through an understanding of the discourses and practices of the Indigenous Community of Chiu-Chiu. Qualitative research was thus considered the best option as “it can be constructed as a research strategy that usually emphasizes words rather than quantification” (Bryman, 2004:20), rejecting the practices and norms associated with quantitative scientific methods (Bryman, 2004, Hoggart et al., 2002). This approach helps to reveal “the qualities of certain phenomena, events and aspects of the world under study” (Cloke et al., 2004:17), generating theories based on individual interpretations of the social world of this community (Bryman, 2004, Cloke et al., 2004).

This thesis, therefore, attempts to understand the world through the eyes of the participants in a social situation, with a particular interest in the multifaceted dynamics within this community (Bryman, 2004, Hoggart et al., 2002). For the purposes of the research, it is assumed that the members of the Indigenous Community of Chiu-Chiu construct their own visions of reality, and methods such as participant observation and non-structured interviews are used as a way of “studying social interaction in its natural surroundings” (Gilbert, 2001:33).

To contextualise this choice of research strategy, it is important to note that within human geography, as well as in political ecology, qualitative research started to become ascendant in the 1970s and 1980s. Under the umbrella of humanistic geography, a new perspective arose which recognised that humans were beings that experience, perceive, feel and think about their reality, thus emphasising “the human part of human geography”

(Cloke et al., 2004:22, Entrikin, 1976, Ley and Samuels, 1978). Beyond this, radical geographers (eg. Peet, 1977), found that qualitative methods were useful because they allowed a “critical window on social and spatial inequalities of many different shades” (Cloke et al., 2004:25).

Give this context, qualitative research thus satisfies the aims of this study, as it facilitates an in-depth analysis of the social and spatial inequalities as understood by the people under investigation. It gives the opportunity “of genuinely revealing the perspectives of the people you are studying” (Bryman, 2004:282). In this respect positionality, in the construction and production of knowledge, constitutes an integral part of the design, fieldwork and writing (Hughes et al., 2000), and such research needs to consider the paradoxes of objectivism, in that while it espouses a position of detachment, it also recognises that its position legitimates engagement in the world it is studying (Hughes et al., 2000).

3.3.2 Ethical considerations

As this research analyses the context, processes and social constructions surrounding people’s lives, it was necessary to include ethical considerations. Ethics is a prominent concern in such qualitative research. Firstly, the use of qualitative methods to reconstruct the lives of a social group, carries perhaps more ethical difficulties than using other techniques (Cloke et al., 2004). This has to do with the fact that ethnographic methods, “are far more conspicuous (...) because of the close relationship between the researcher and the community” (Ley, 1988:132). Secondly, this research will have to take into account ethical considerations regarding the information-gathering, since qualitative research must include “constant self-criticism and re-evaluation in an attitude of humility” and “be based upon a personal commitment to genuine communication with others in an attitude of mutual respect” (Campbell, 1974:104-5).

It was therefore considered essential that the researcher informed the participants as to the characteristics and conditions of the research (Cloke et al., 2004, de Vaus, 2001, Gilbert, 2001, Hammersley and Atkinson, 1995). Therefore, following de Vaus (2001), the participants were informed as to the purpose of the study, the basic procedures to be used, the identity of the researcher and how the data would be used. As the researcher,

therefore, I sought the full consent of those being researched (Hammersley and Atkinson, 1995).

It was also necessary to respect the privacy of participants by safeguarding the confidentiality of data. For many authors (Cloke et al., 2004, de Vaus, 2001, Gilbert, 2001, Hammersley and Atkinson, 1995, Hoggart et al., 2002) respect for privacy is crucial since, not only is it a basic requirement of ethically informed work, but also by doing so the researcher hopes to establish better relations with interviewees, resulting in frank and honest answers (de Vaus, 2001). Indeed, ensuring participants' confidentiality means that they are "more likely to participate in the study, specifically if it is about private matters" (de Vaus, 2001:87). It was thus critical for this research, given its focus on sensitive intra-community issues.

Further, there was a need to be sensitive to the risk of harm or other negative consequences for participants, as well as being careful to avoid appearing to exploit them, for example, "'using' respondents to gain information while giving little or nothing in return" (Cloke et al., 2004:165). As scholars have argued (Cloke et al., 2004, de Vaus, 2001, Gilbert, 2001, Hammersley and Atkinson, 1995), the researcher should always be alert to avoiding negative consequences either to participants or the study. Therefore, as recommended by de Vaus (2001:84-5), I provided "an outline of reasonable foreseeable risks, (...) a description of the likely benefits of the study (...) (and) a description of how (...) (participants) were selected". It was also made clear to participants that they were able to "withdraw from the study at any point" (de Vaus, 2001:84). With these safeguards, this study conformed fully to the ethical requirements outlined by the Research Ethics Panel of King's College London (see Appendix A and B for ethical approval letters).

Finally, the research process took into account the ethical considerations arising from the fact that the fieldwork conducted within an indigenous community in Chile that had been subject to much tension and conflict over local water rights. As Hammersley and Atkinson (1995) stress, sensitivity to cultural and gender differences must be central to the research. Therefore, the researcher was sensitive to the rights, beliefs, and cultural context of the participants, and their position in relation to different actors, such as TNCs (Transnational Corporations), State institutions and NGOs (Non-Governmental Organisations). As per McCartney (1995:42-3), the research followed an ethnography

pathway linked to a “decentred and multicultural public sphere (which) (...) might enable the voices of neglected others to be represented”, conscious of how such representation is inevitably a difficult process in a study of this kind. I was further aware of the need to recognise my own positionality in this process, as mentioned above. As a Chilean environmental advocate with a deep concern for indigenous issues, the inferior development of these groups in the country was bound to elicit some personal concern, and may have influenced how I approached the topic in terms of openness and closeness. In this sense, being perceived as an ‘insider’ gave me a “privileged position from which to understand processes, histories, and events as they unfold” (Hakim, 1982:320). I was also conscious of the unequal nature of the power relations between researcher and participant and thus endeavoured to develop techniques for conducting the research sensitively, such as sharing similar experiences and engendering mutual respect (Hoggart et al., 2002).

3.4 DATA COLLECTION

As the case study approach works best with multiple methods of data collection, various qualitative methods were used here, notably ethnography, interviews and documentary analysis. While the generation of data focused primarily on members of the Indigenous Community of Chiu-Chiu, the views of other stakeholders such as State authorities, NGOs, academics, and corporations were surveyed. Primary data generation was supplemented where necessary by secondary data from articles and books (Kitchen and Tate, 2000).

3.4.1 Ethnography

The principal method of data collection used in this research was ethnography, as it is able to facilitate nuanced analysis that focuses on the culture of social groups. As Cloke et al. (2004:169-70) state, ethnography is an “extended, detailed, immersive, inductive methodology intended to allow grounded social orders, worldviews and ways of life gradually to become apparent (...) (treating) people as knowledgeable.” It is a method where the researcher is submerged in a social group for a period of time, trying to study what people say and do, and the primary reasons for those actions (Bryman, 2004, Cloke et al., 2004). Thus, ethnographic findings are not ‘realities’ from the field, but inter-subjective constructions within an iterative process (Hoggart et al., 2002, Parr, 2001).

This method is in effect a type of participant observation whereby the researcher has to actively interact with the participants of the research (Jackson, 1994). In this sense, an ethnographer differs from a detached observer because he or she will play an active role in the scene being investigated, trying to empathise with the participants in a social situation in order to 'look through their eyes' (Hoggart et al., 2002). He or she will try to find "some role in the field being studied (...) at least through implicit, and probably (...) explicit, negotiation with people in that field" (Hammersley and Atkinson, 1995:4). Here, a recognition of the specific research circumstances is vital as is the recognition that the main research tool is the researcher in question (Cloke et al., 2004). A choice needs to be made as to whether the research will be overt or covert. In this research the ethnography was overt, as the openness of the researcher's appearance was considered to be an important factor in building trusting relationships with the community members (Hammersley and Atkinson, 1995). Indeed, "covert observation is clearly a violation of the principle of informed consent" (Gilbert, 2001:55), because it invades the privacy of participants, and does not allow them the opportunity to decide whether or not to be a part of the ethnography, it could not be condoned in this study.

Carrying out ethnography on the village of Chiu-Chiu, this research drew on the interpretation of "meanings, functions, and consequences of human actions and institutional practices" (Hammersley and Atkinson, 1995:3) which involved gathering data from a range of sources. It has been noted that ethnography "can involve a 'shamelessly eclectic' and 'methodologically opportunist' combination of research methods" (Jackson, 1985:169) underpinned by an extended period of participant observation research (Cloke et al., 2004, Hoggart et al., 2002, Jackson, 1985). It requires building an understanding through the examination of processes and participants (de Vaus, 2001), combining methods such as individual and group interviews, and documentary analysis. In terms of direct observation, this research made use of fieldwork notebooks detailing the things seen and discussions conducted. Photos were also taken, to provide an additional visual account for the case study. My previous research in the community was particularly useful in these endeavours, as I already knew some of the community's leadership and internal dynamics.

Following other scholars (Cloke et al., 2004, Hammersley and Atkinson, 1995), field notes were taken throughout the process, starting with rough notes elaborated daily, followed by

descriptions and narratives of scenes, characters and roles (Cloke et al., 2004). Likewise, the observational data records, including semi-standardised interviews, were written chronologically and stored in order, as the subsequent process of analysis required active organisation of the data into dimensions and categories of analysis (Hammersley and Atkinson, 1995). Considering that, ideally, field-noting “should be delayed no later than the morning after observation” (Gilbert, 2001:152) and with regard to the amount of time it takes up, the fieldwork process required a careful balance between ‘doing’ and writing (Cloke et al., 2004, Gilbert, 2001).

There is some consensus in the literature regarding the content of field notes. Firstly, they should provide a complete description of events, people and social interactions, bearing in mind that each new member or setting needs to be described (Cloke et al., 2004, Gilbert, 2001). Secondly, as a general rule, part of the research procedure should be oriented to getting all the material that may be pertinent, in case it is necessary to return to the data upon further reflection (Becker, 1998, Hammersley and Atkinson, 1995). Finally, field notes should try to maintain “the lowest level of inference: (...) 'behaviouristic' rather than seeking to summarise” (Gilbert, 2001:153). As the researcher, therefore, I sought to follow these guidelines throughout the fieldwork.

3.4.1.1 Interviews

Interviewing within ethnography has different nuances and characteristics compared with standard qualitative interviews. According to Hammersley and Atkinson (1995), ethnographic research encompasses a range of interview styles, from spontaneous and informal conversations to formally arranged meetings, so the line between participant observation and interviewing can be quite blurred. Nevertheless, this should be considered as a rich resource rather than a problem (Hammersley and Atkinson, 1995), recognising the active nature of interviewing but enhancing the chances of garnering complex and valuable information about the issues under investigation (Holstein and Gubrium, 1995).

Although interviews alone do not constitute ethnography, as they “cannot report (...) unconscious or unarticulated practices” (DeLyser and Herbert, 2010:129), semi-structured interviews are useful for research as they increase interaction with community members, allowing the “researchers to fine tune the explanation and satisfy themselves that the

respondents had a sufficient grasp to reach a considered view” (Gilbert, 2001:126). Furthermore, “the 'artificiality' of the interview, when compared with 'normal' events in the setting, will allow the researcher to understand how participants would behave in other circumstances” (Hammersley and Atkinson, 1995:108).

In this regard, there were several reasons why I found interviews to be a useful complement to ethnography. As Bryman (2004:339) states, there are a “range of issues that are not amenable to observation”, so asking people about them is sometimes the only way of finding out suitable information. For example, information about productive activities (informal trade and networks) developed outside the community was discussed during interviews (see Appendix C). Also, through qualitative interviews it was possible to reconstruct events that had happened in the village of Chiu-Chiu over the last few decades, for example concerning the Water Code application in 1984.

Since participant observation “can be very intrusive in people’s lives” (Bryman, 2004:341), interviews were also used in this research when less involvement was required, particularly with stakeholders such as State authorities and big corporations who might be less willing to grant time for discussion. Interviews thus provided the opportunity to increase the scope of analysis beyond what is happening in the community as they “can address quite focused questions about aspects of organizational life (...) such as selections decisions” (Cassell and Symon, 2004:20-21) in a limited period of time. Also, as interviewing can be an appropriate method to emphasise particular aspects of the research and because the format would be more familiar for some of the research participants such as NGOs, State authorities and corporate officials (Cassell and Symon, 2004), I focused the interviews on topics that were not easy to observe, such as historical and legal issues. In addition, the format enabled those actors to explore diverse causal processes and patterns.

It has been noted that the interviewing process goes hand-in-hand with ethnographic observation (Becker and Geer, 1957, Bryman, 2004). The latter helps to situate the researcher’s understanding in the context of a flow of events, while avoiding disruption of normal community life. Also, given that there are cultural differences within the community and that interviews represent only a small, temporary ‘space’ in which to try and understand particular community ‘codes’, ethnography provides the necessary space to

understand what particular words and meanings signify in the community (Becker and Geer, 1957). Active observation within the community gives the opportunity to cross-check descriptions and analyses obtained through the interviews, thereby reducing possible distortions introduced by the participants (Becker and Geer, 1957), “gaining a (better) foothold on social reality in this way” (Bryman, 2004:338).

Finally, the individual interviews and participant observation were complemented by group interviews within the ethnography. As Keats (1999) states, the relevance of this method (group discussions) is that it gives voice to feelings and experiences that are usually not obtained with individual interviews. Also, it provides the chance to obtain a collective understanding of the main topics of analysis, facilitating dynamic relations between the researcher and the participants (Laws et al., 2003).

3.4.1.2 Documental Analysis

Another data collection method used in this research was documental analysis. According to Hoggart et al. (2002:75), documental analysis is categorised as secondary data analysis, as it “indicates that researchers are removed from the (...) collection process.” This means of data collection can nonetheless be central to the research because, when combined with other methods, it facilitates repeated analysis of data, thereby allowing the (re)formulation of research questions (Laws et al., 2003).

Documental analysis was considered important for conceptual, methodological and also economic reasons (Bryman, 2004, Kitchin and Tate, 1999). In conceptual terms, some information such as official statistics are not available in any other form, therefore requiring documental analysis. Methodologically, it was useful because secondary data allow replication of the analysis, as well as the possibility of comparing some of the findings with other research sources. Finally, for economic reasons, access to secondary data can provide important savings (Bryman, 2004), as collecting data consumes time and money. Furthermore, as Hakim (1982:16) states, using secondary data helps “the researcher to think more closely about the theoretical aims (...) rather than the practical and methodological problems of collecting new data”.

There were, therefore, various advantages to be gained from using secondary data in this research, which included official State documents and TNC annual reports, and the fact that documentary analysis “offers excellent learning opportunities with potentially much larger study samples” (McArt and McDougal, 1985:55). Using secondary data may sometimes present a limitation in that it may require a period of familiarisation and acclimatisation (Bryman, 2004). However, this was not a problem, as there is still relatively sparse documentation on indigenous groups in northern Chile.

When using secondary data, there are various criteria that should be used to assess its validity (Ahmed, 2010, Bryman, 2004, Hoggart et al., 2002, Kitchin and Tate, 1999, Scott, 1990), including: authenticity, credibility, representativeness and meaning (in terms of clarity of evidence). Herein, first the authenticity of sources was analysed by reviewing the internal consistency and the provenance of the documents. Secondly, the credibility was assessed in terms of the accuracy of the sources and the methods used. Thirdly, the representativeness was measured by looking at the general trends of the time and place where the research was done, checked against other sources. Finally the meaning of the secondary data was assessed, bearing in mind that the source should be used not only in a literal sense, but also considering different levels of interpretation.

In summary, documentary analysis was able to enrich the analytical potential of this thesis by offering new view points of the subjects involved and helping to avoid duplication of information, thereby allowing more detailed research. However, care must also be taken to guard against bias in such materials, as authors can ‘frame’ issues in self-interested ways. I therefore used such information for comparison when conducting formal and informal interviews.

3.5 FRAMEWORK OF ANALYSIS

In terms of data analysis, the identification of codes or categories is important. According to Hammersley and Atkinson (1995), the identification of categories is key to the process of analysis as it helps to organise the field materials. In the case of this research, this applied to the field observations and notes taken during the ethnography as well as interview transcripts (Flowerdew and Martin, 2005) for the “reading of the data” (Hammersley and Atkinson, 1995:154). Although categories may change over the course

of research, during field-note taking, the identification of categories was focused on space and physical places, the social groups involved, sets of actions, sequences taking place over time, and people's intentions and emotions (Spradley and Baker, 1980, Wolfinger, 2002). Given that the emphasis of this work was on how and why people do things and the meanings of their actions (Laws et al., 2003), there was a need for particularly detailed transcripts, including even tone of voice and informal comments (Flowerdew and Martin, 2005).

The elements mentioned above helped to define the analytical structure. This is crucial as ethnographic data can be quite demanding in terms of producing a mass of information. Therefore, the main approach adopted for this research was 'sequential analysis,' as suggested by Becker (1971), whereby the analysis starts while still gathering data. This allows the researcher to go back and search for further data related to specific topics of interest. In this sense, the analysis was "an iterative process in which ideas are used to make sense of data, and data are used to change our ideas" (Hammersley and Atkinson, 1995:159). This research involved the creation of codes to organise the field materials so that interesting relations between the field research and existing literature could be seen. This process, called analytic induction, uses two types of codes, emic and etic. Emic codes correspond to those used by the informants themselves, while etic codes are used to describe events and to attribute meanings and theories by the researcher (Flowerdew and Martin, 2005).

This process of analysis involves five stages (Hammersley and Atkinson, 1995). First, there is the generation of emic codes (concepts) to make the data intelligible, to provide a general perspective, and to identify some broad patterns. Second, etic codes (analytic strategies) are developed to explore the availability of theory tools and analytical frameworks. Third, the combination of both types of code with social action are emphasised, taking a special care for how people construct their social worlds through interaction in social activities, as well as trying to understand what people are doing and why. Fourth, typologies are carried out to produce an in-depth description and explanation of different community members and other stakeholders. In this research, the idea was to understand how problems are faced and understood within strategies of negotiation, considering intergenerational relations as central to the analysis. Finally, indicators are

elaborated to give effectiveness to the typologies as part of the overall analysis of the case study, for example the confidence gained from being part of external negotiations.

Throughout, social context plays a special role, as it is the “heart of the conflict interpretations” (Hammersley and Atkinson, 1995:176). Three levels of analysis are considered herein. The first level analyses the history of indigenous people’s role in Chile’s water resource management, trying to broadly narrate the position of these groups (Chapter 4). The second level focuses on the ‘events’ and ‘turning points’ that have helped to constitute different rationalities about local development (Flowerdew and Martin, 2005), trying to identify how certain pivotal actions shaped key events or outcomes in the current juncture (Chapter 5). The third level starts from the premise that “most communication works through intentions” (Flowerdew and Martin, 2005:195) in order to analyse the interactions of the Indigenous Community of Chiu-Chiu with external actors, as well as the perceived costs and benefits, accounting for the different roles that actors adopt and how they can vary over space and time. This aspect assesses the role of time in the sequence of social interactions, as well as attempts to understand how shifting knowledge shapes local actions (Chapter 6 and Chapter 7).

3.6 FIELDWORK REFLECTIONS

In order to examine the complex dynamics of the Indigenous Community of Chiu-Chiu with external actors, I made the decision to do ethnography in Chile, to try to observe the complex and multifaceted ways in which these relations were conducted. For 9 months, between September 2011 and May 2012, I carried out fieldwork in Chile that mixed formal interviews with State authorities and NGO leaders in Santiago (Chile’s capital) with informal meetings at barbecues and cultural celebrations with members of the Indigenous Community of Chiu-Chiu in the Atacama Desert.

Overall the fieldwork went well, as I was received well by various actors, such as TNCs, State institutions and NGOs. I conducted 60 interviews, at three levels: national, regional and local (see Appendix D). The national interviews (12) were conducted in Santiago and aimed at understanding the ‘big picture’ of the Water Code in Chile, while the regional interviews (15) were carried out in both Calama and Antofagasta with the goal of understanding the regional authorities’ positions on water conflicts between mining

companies and indigenous communities. Local interviews¹ (30) took place in the village of Chiu-Chiu with both members of the Indigenous Community of Chiu-Chiu and other non-member residents, taking care to be especially sensitive to the rights, beliefs and cultural context of the participants. Members of the community were divided in two groups: indigenous leaders and indigenous representatives. While the first group is represented by members who have held (or are currently holding) a leadership position in the Neighbour Council and/or in the Indigenous Community of Chiu-Chiu, the second group corresponds to members of the community that are not part of the formal leadership.

Although I travelled to Chile in the September a couple of hours after completing my Upgrade, the ethnographic period did not start until November, for two main reasons. First, when my wife and I arrived in Chile, a relative was extremely sick so we decided to stay in Santiago with him for a month. In the meantime, I took the opportunity to review official programmes related to with water, natural resources and indigenous communities, among others. Second, I was not able to start any data collection until I had received ethical approval from the GGS Research Ethics Panel, on 20 October 2011.

In November 2011, my wife and I travelled around 1,650 km in three days by car from Santiago to San Pedro de Atacama, where we rented a house in a small village called Coyo, 120km from the village of Chiu-Chiu. My initial reason for deciding to have the operation base in Coyo was practical, as it was an affordable place to stay with Internet connectivity. However, after a couple of weeks of travelling daily to the village of Chiu-Chiu, I realised that staying 3-4 days a week in a small local hostel while undertaking my research in the village was preferable. Another reason to stay in Coyo, was because during my fieldwork the Indigenous Community of Chiu-Chiu was suffering serious internal conflict over leadership and representation, with a major division forming between two former presidents of the community. I therefore preferred to maintain a more detached approach to the community, in order to avoid being identified with one side or the other.

The village-level work occurred in three phases: November-December 2011, January-February 2012 and March-May 2012. Phases 2 and 3 were harder due to the adverse weather conditions of the 'Altiplano Winter,' causing delays in my weekly trips from Coyo

¹ Six of these interviews were held during preliminary fieldwork in the winter of 2011.

to Chiu-Chiu. Therefore, I decided to stay in Chiu-Chiu for longer periods in order to complete the interviews I had scheduled and reduce the risk of an auto accident.

Another problem I encountered during fieldwork was related to the fact that local actors always avoid signing official documents. This meant that the consent form for participants was not well received at the beginning, even though it was a safeguard for them in terms of confidentiality and anonymity. In order to deal with this problem, I attempted to empathise with them and reorient the discussion towards informal interviews based on oral consent, asking them to sign the form later. Additionally, I took copious fieldwork notes, detailing my observations and the issues discussed. However, on reflection, I think that having the consent form in English (with a Spanish translation) was a mistake, as it generated a certain amount of distrust.

In addition, my identity as a non-indigenous, young, male researcher from Santiago studying in London caused tension in my relationships with local respondents at the beginning. However, after showing my deep concern for indigenous issues, specifically their water conflicts with Codelco, they were more open to dialogue and to participate in the research. As a proof of my commitment I offered them an executive summary of the research in Spanish (their mother tongue), to be used as a tool for future negotiations.

Finally, reflecting on my doctoral research as a learning experience, I think that 9-months of ethnography was not sufficient to allow me to participate in all community activities. I was, therefore, unable to take part in various cultural activities that took place between June and October, such as the Channel Cleaning, that I believe would certainly have strengthened my ethnographic analysis.

3.7 SUMMARY

This chapter has outlined the qualitative methodology of research adopted herein. It has specified the use of a case study approach, as well as explored the process of data generation and the analysis framework developed in the empirical analysis in Chapters 5-7. The next task, in Chapter 4, is to provide an overview of post-colonial (*i.e.* since the early 19th century) water resources management and indigenous community dynamics in Chile.

CHAPTER 4. INDIGENOUS PEOPLE AND CHILEAN WATER RESOURCES MANAGEMENT

Mi tierra es hermosa. Yo vengo de Atacama (...) por muchos años nosotros hemos estado aquí. Tierra de montañas, tierra de frío, tierra de esfuerzo (...) Ahí están nuestros fuertes y grandes pueblos San Pedro de Atacama, Toconao, Caspana, Chiu-Chiu, soles que nunca se apagarán en nuestra tierra atacameña.

(My land is beautiful. I come from the Atacama (...) for many years we have been here. Land of mountains, land of cold, land of effort (...) There are our strong and large towns San Pedro de Atacama, Toconao Caspana, Chiu-Chiu, suns that will never set on our land Atacama)

Nostalgias Lickantay, Pat Ta Hoiri Musical group. Chiu-Chiu, Chile.

The aim of this chapter is to outline the socio-political background and context of the indigenous people's position in Chile's water resource management struggles. Specifically, it will briefly analyse both the general political economy of Chile (section 4.1) and post-colonial water resource management from 1818 to the present (section 4.2), as well as a selective overview of the history and context of the indigenous Atacameño people (section 4.3). This chapter also develops a background description of mining company Codelco (the TNC involved in the conflict)² and the Chuquicamata project (section 4.4), as well as the Indigenous Community of Chiu-Chiu affected by this project (section 4.5).

4.1. POLITICAL ECONOMY OF CHILE

Chile is a country of particularities. Besides the territorial condition of the country, which is about 2,600 miles long and about 90 miles wide with great variations in climate, it has gone through numerous political and economic changes since Ferdinand Magellan and the members of his Spanish expedition were seen and heard for the first time in what is now Chile in 1520. However, it was not until the first incursion into Chile (1536), led by the Spanish conqueror Diego de Almagro, when the history of Chile as we know it began. From then until the attainment of Independence in 1810, Chile gradually developed as a small agrarian colony of the Spanish American Empire (Collier and Sater, 2004).

Despite its distance from European centres of power, the advent of Chile's independence was deeply influenced by external events. Thus, the invasion of Spain by Napoleon in

² Besides the divisions that Codelco has in Chile, it has an alliance with the Ecuadorean state mining company Enami EP to start exploration at the Llurimagua copper and molybdenum project on 2014.

1808, and the elevation of his brother, Joseph, to the Spanish throne, generated much animosity in Chile. In response, educated local *criollos* (creoles), who had earlier promoted economic and social reform, radicalised their position by advocating full autonomy. However, this movement did not have unanimous local support among Chileans, as people were divided between independents and royalists, transitioning from a political movement that began among elites to a fully fledged civil war in three phases: the *Patria Vieja* (Old Fatherland) (1810-1814); the *Reconquista* (Reconquest) (1814-1817); and the *Patria Nueva* (New Nation) (1817-1823). During the last phase, Chile was ruled by General Bernardo O'Higgins, who is described as the 'Liberator of Chile', and received diplomatic recognition from countries including Portugal (August 1821) and the United States of America (US) (March 1822) (Collier and Sater, 2004).

A fully fledged Republican era only arrived in the 1830s and lasted until the 1880s. Beginning with the Constitution of 1833³, Chile underwent commercial expansion based on export-led modernisation. Indeed, "from 1830 onwards Chile had developed as an export economy, with the 'engine' of growth provided by the export of copper, silver, wheat and flour before the War of the Pacific (1879)" (Palma, 2001:45). It even became known as the 'model republic' of South America (Collier and Sater, 2004) and not for the last time. Between the 1850s and 1860s, this trend continued as Chile became a leading world producer of copper despite its distance from major markets (in Europe and the US) and its technological limitations (Palma, 2001). Yet this left the country vulnerable to market shocks. At the end of the 1870s, for instance, the price of copper swiftly fell by 20 per cent and Chilean copper exports by 16 per cent, causing an economic recession in the country (Collier and Sater, 2004).

In this period, during the second half of the 19th century, the Chilean government began a military occupation of indigenous lands, especially Mapuche lands, to "protect national and foreign (German, Swiss, Italian) colonizers who began to expand southwards" (Azócar et al., 2005:59). In this manner, the Chilean Government established the idea of "a battle between civilizations and savages (...) [with the aim of solving] the dilemma between progress versus underdevelopment" (Azócar et al., 2005:59). Meanwhile, politics also shaped the fate of the country. Between 1879 and 1883, the so-called War of the Pacific

³ Between the years 1811 and 1828 Chile had nine constitutional texts. Since 1833 Chile has had only three: 1833, 1925 and 1980 (Carrasco 2001).

defined the regional context. The Atacama Desert became extremely valuable after the discovery of silver, guano and nitrates, encouraging both Chile and Bolivia to vie for control of a region they had hitherto neglected. Thus, Bolivia in alliance with Peru, declared war on Chile invoking a secret treaty signed between them in February 1873. In April 1879, Chile in turn declared war on both Bolivia and Peru after an intervening period of uneasy truce. In general, conflict centred on nitrate camps in the desert (nitrate was valuable for its use in the manufacture of explosives) and coastal ports necessary to guarantee the flow of imports and exports (Collier and Sater, 2004). After five more years of struggle, Chile won the war in 1883 and thereby annexed both the Province of Antofagasta, which had hitherto belonged to Bolivia, and the Province of Tarapacá, which had belonged to Peru (Yañez and Molina, 2011).

After the War of the Pacific, Chile entered the era of the so-called Parliamentary Republic (1882-1920), which benefited greatly from valuable nitrate exports. While some official initiatives sought to develop both a pastoral and an agricultural economy, foreign competition from Australia, Canada, the US, Argentina and Russia lowered prices in these sectors, a situation that worsened with the opening of the Panama Canal in 1914. Chilean manufacturers experienced a contrasting reality, enjoying rapid growth in order to satisfy the needs of a rising urban population (notably in the capital of Santiago) and well-paid nitrate workers in the north. Indeed “between 1875 and 1907 the population of the *Norte Grande* (which currently comprises the regions of Arica and Parinacota; Tarapacá; and Antofagasta) grew from 2,000 to 234,000” due to the prospect of lucrative jobs founded in the northern *salitreras* (nitrate mines) (Collier and Sater, 2004:163). Even though nitrates were a speculative commodity dependent on the economic fortunes of foreign customers, such as Germany, the US, France and Belgium, and, therefore, whose price fluctuated enormously, it became the main resource of the country, representing as much as 80 per cent of total exports and providing half of the government tax revenues during the First World War when it was in particularly high demand (Palma, 2001).

Still, the nitrate industry declined following the development of synthetic nitrate, while the copper industry started to grow. In contrast, the First World War accelerated the growth of the latter, tripling the levels of production and doubling exports between the years 1914 and 1918, reaching, in 1917 alone, almost 19 per cent of total exports (Collier and Sater, 2004). In this sense, the opening of the mines El Teniente in 1912 and Chuquicamata in

1915 (see section 4.4), then the largest underground and opencast mines in the world respectively, gave a new status to Chile as it underpinned strong foreign trade (Palma, 2001). Nevertheless, as a result of the collapse of nitrate mining during the 1920s and the decline of the country's import capacity during the Great Depression of 1929 and beyond (by 60 per cent between 1929 and 1931), "Chile was forced to satisfy an increasing proportion of its requirements for a wide range of manufactured consumer goods from domestic production" (Garcia and Wells, 1983:287), opening a new era of economic insecurity. Political transformation was also a factor at this time. Thus, based on the Constitution of 1925, which had established a presidential regime (Carrasco, 2001), Radicals, Democrats and Liberals formed a Liberal Alliance led by Arturo Alessandri (1932-1938)⁴ designed to restore stability to the country, thereby laying the foundation for the next four decades of democracy (Rector, 2005).

In the late 1930s, the direction of the country changed again, as a programme of rapid import-substituting industrialisation was promoted, similar to what was then being promoted in Latin America by the likes of the Argentinean banker Raul Prebisch. This initiative was developed by a coalition of Communist, Socialist and Radical parties to protect the nascent local manufacturing industry through a set of tariffs, as well as to support other key enterprises (notably copper). However, focusing on the growth of a relatively inefficient industrial sector limited the expansion of other sectors, such as agriculture (whose per capita output stagnated between 1930 and 1960) let alone the provision of public services (Garcia and Wells, 1983) and therefore the Chilean economy encountered several difficulties (Ahumada, 1966, Pinto, 1960). Hence, industrial growth decreased between 1947 and 1963, while the rate of growth in per capita GDP averaged just 1.5 per cent between 1950 and 1970, a lower rate of growth than experienced by other Latin American countries (Garcia and Wells, 1983).

Several processes of social change accompanied industrialisation in Chile that must be mentioned here. The introduction of universal suffrage and growing literacy, among other social reforms, increased the ability of underprivileged groups to express their discontent with inequalities and assert political transformation, notably motivated by a 70 per cent annual rate of inflation and an economic growth rate of zero during the 1950s (Garcia and

⁴ Arturo Alessandri was a political figure, lawyer and reformer who served as the President of Chile for two terms: from 1920 to 1924 (also a couple of months in 1925), and from 1932 to 1938.

Wells, 1983). After almost three decades of radical governments (from 1938 to 1952) and the military rule of Carlos Ibáñez del Campo (1952-1958)⁵, the right-wing politician Jorge Alessandri Rodríguez came to power from 1958 to 1964 confronting this situation through liberal reforms such as tax incentives for foreign business, liberalisation of foreign trade and a relaxing of exchange rate controls, all measures suggested by both the Klein-Saks Mission of the International Monetary Fund (IMF) and the US government through the Alliance for Progress⁶ (Garcia and Wells, 1983).

Between 1964 and 1973, in an effort to solve social problems and enhance economic growth Chile had two successive reformer governments. The Christian Democrat government led by Eduardo Frei Montalva lasted from 1964 to 1970 under the banner of 'revolution in liberty' and introduced several reforms to address inequalities in the country without causing direct social confrontation (Collier and Sater, 2004, Silva, 1993). For this, the Christian Democrats not only increased expenditure for social programmes in housing and education in order to redistribute income to the poorest sectors, but also proposed land and tax reforms. The Land Reform Initiative of 1966 is considered an emblematic case as it sought to more actively incorporate the peasantry into economic, social and political decision-making processes (Kay, 1978). Despite these initiatives, pressure from popular sectors became intense, generating political mobilisations and an explosion of social demands (Lehmann, 1971, Silva, 1993).

In 1970 the left-wing *Unidad Popular* (UP) (Popular Unity) coalition came to power democratically. This government approached the idea of social justice in a dramatic new way. Indeed, it changed the whole discourse, stating that the situation was a direct consequence of class exploitation by the rich, and not, as the Christian Democrats had argued, the result of underdevelopment and a lack of social progress (Silva, 1993). Hence, the 'transition to Socialism' led by President Salvador Allende sought to strengthen State control over all strategic sectors of the economy, including nationalising the large mining companies (see section 4.4), along with hundreds of medium and large industries and

⁵ The three radical governments were led by Pedro Aguirre Cerda (1938-1941), Juan Antonio Ríos (1942-1946) and Gabriel González Videla (1946-1952). The military general Carlos Ibáñez del Campo served as a dictator between 1927 and 1931, but was elected democratically in 1952.

⁶ In 1955 the government of Chile hired the US consulting firm Klein-Saks, who worked in Chile to evaluate economic conditions and to elaborate a set of recommendations regarding anti-inflationary policy (Edwards 2005). The Alliance for Progress was a US programme, initiated in 1961 by then US president John F. Kennedy to establish economic cooperation between the US and Latin America.

most banks (Silva, 1993). Economic redistribution on a grand scale thereby commenced, while politics became intensely ideological (Loveman, 1986).

The watershed events of 1973 have profoundly shaped Chile ever since, including the issues of interest to this research. On 11 September 1973, the military dictatorship of General Augusto Pinochet (1973-1989) began “not as a coup *d’état* but as a war” (Klein, 2010:75). Santiago appeared to be a war zone: “tanks fired as they rolled down the boulevards, and government buildings were under air assault by fighter jets. But there was something strange about this war. It had only one side” (Klein, 2010:75). The main goal was to transform political institutions while restructuring Chile in social and economic terms in a pro-capitalistic manner (Loveman, 1986), with severe repression of all leftist groups. In general terms, the “Chilean economy began the transition to markets by implementing a number of major economic and institutional reforms aimed at attaining three different objectives: stabilization, privatization, and liberalization” (Labán and Larraín, 1995:116). To ensure that these reforms would have no opposition, the Congress was closed, UP parties were banned, and a new Constitution (1980) was imposed (Loveman, 1986).

The technocratisation of decision-making became the answer to all the problems that Chile was facing. The new neoliberal economic team, the so-called Chicago Boys named after the University of Chicago where they were educated, together with the *gremialistas* (an ultraconservative political doctrine of Catholic origin), led the economic and social reforms of this period, inspiring ‘technical and scientific’ principles that promoted a capitalist modernisation, devoid of political and ideological posturing (Silva, 1991). While two economic recessions (in 1975 and 1982) tested the capacity of these free-market reforms, the process endured under military rule, despite the fact that Chile had a commercial debt of U\$2.7 billion by 1981 (representing 71 per cent of export value) and unemployment rates above 30 per cent by 1982 (Cypher, 2005). After 1985, in contrast, an economic boom began, and until 1989 “the volume of exports of goods and services expanded at an average annual rate of 10.5%, and Chile became one of the countries with higher outward orientation” (Cypher, 2005:765).

Democracy finally returned officially in 1990 prompting a new set of changes. This process started on 5 October 1988 when voters rejected another eight-year presidential term for the aging Augusto Pinochet, creating a group called *Concertación de Partidos por el No*

(Coalition of Parties for the 'No' Vote) transforming later into a centre-left coalition called *Concertación de Partidos por la Democracia* (Coalition of Parties for Democracy), whose leader Patricio Aylwin was elected with an absolute majority in December 1989, and who started his government in March 1990 (Garreton, 1995, Labán and Larraín, 1995). The Aylwin administration was widely considered a 'transitional government' that had to deal both with the authoritarian pressure of a cohesive bloc of Pinochet-appointed senators, and with popular expectations surrounding democratic stability and economic management. An illustration is the creation of the Indigenous Law 19.253 in 1993, in which the State recognised the main indigenous ethnic groups (see section 4.3) (Molina, 2010).

Three governments from the same coalition followed Aylwin's administration: Eduardo Frei (1994-2000), Ricardo Lagos (2000-2006) and Michele Bachelet (2006-2010). The latter is particularly important; Bachelet was the first female president elected in both Chile and Latin America, making this a historic moment for women and gender equality not only in Chile but also in Latin America (Tobar, 2008). During these periods, economic and social policies were developed, although a long-lasting recession between 1999 and 2003 prompted rising unemployment and a deterioration of income distribution. However, 2004 to 2008 marked a period of more even income distribution and economic recovery, due to further social reforms (Contreras and French-Davis, 2012). Until March 2014 the conservative government of Sebastian Piñera (2010-2014) held power, following the neoliberal model so long favoured by the Pinochet dictatorship. The current socialist government of Michelle Bachelet returned to power, reinstalling an agenda focus on social policies.

4.2 POST-COLONIAL WATER RESOURCES MANAGEMENT IN CHILE

Water has been an element of much debate in Chile ever since Independence. In 1819, for instance Bernardo O'Higgins dictated, with the agreement of the Senate, explicit legislation to solve issues considering industry water usage and to define irrigation practices, showing thereby that government intervention was relevant in managing public water issues from the start (Vergara, 1990). During the 20th century, different un-official works promoting the importance of having a Water Code in Chile, appeared in the legal journal based in Santiago "*Gaceta de los Tribunales*", showing the importance of this issue, especially

regarding water control and allocation. In this context, the 1855 Civil Code⁷ (under the Constitution of 1833) stated that “rivers and all waters that run through natural channels are national goods of public use and establishes that access to water is obtained by means of water use rights granted by the competent authority” (Hearne and Donoso, 2005:56). In short, “the 1855 Civil Code declared water as a national good of public use” (Budds, 2004:325).

Still, Chile did not have a dedicated Water Code until 1951. Although Rafael Moreno Echavarría, the Deputy of the Republic, developed the first Water Code project in 1927, it only became effective in 1951 (Bauer, 1997). Since then, it has been possible to identify tension in the Chilean Law, as notions of public and private ownership are incorporated (Vergara, 1990). Although imposing legal conditions on private ownership, it showed some ambiguity when referring to these notions (Bauer, 2004). Indeed, it recognised water as ‘national property of public use’, but allowed the State to grant private rights through administrative concessions (Bauer, 1997).

The Water Code of 1951 had a conflict-resolution logic to it when it set out allocation and administrative concessions. It harmonised the conflicting interests by giving preference to different types of water use, prioritising personal and domestic consumption followed by irrigation, electricity, and finally, other industrial uses (Yañez and Molina, 2011). This was important as it sought to resolve requests for the same water flow (Rios and Quiroz, 1995). Significantly, this Code also distinguished between private and public ownership of water, allowing the State to give concessions to private parties. However, water transfers were allowed among private parties provided that they maintained the same type of water use. When a change in water use was involved within the categories mentioned above, free transfers were not allowed and therefore concessions had to return to the State and be received again (Rios and Quiroz, 1995). This arrangement showed how these concessions ‘worked’ as private property but with a significant role for the DGA (General Water Directorate) “who could cancel water rights if their owners did not use them for a period of five years” (Bauer, 2004:38).

⁷ The Civil Code was elaborated in 1855 by the jurist and legislator Andres Bello and came into force in 1857. Although the Code has suffered numerous modifications, it has been in force since then.

In 1967, however a new Water Code greatly expanded government control of the sector. This Code is considered to be a by-product of the Agrarian Reform of 1967, enacted by the Government of Eduardo Frei, which aimed to expropriate and redistribute large landholdings and modernise agricultural production, following a Latin American trend of centralised governments (Thome, 1971, Bauer, 2004). This new Code established that all water, with no exception, was State property, and concessions could not be transferred or sold among private parties. Although the State continued giving concessions to private parties, it now had the right to take them back without compensation. Therefore, “this piece of legislation represents a breaking point with respect to previous and posterior legislation which, using different approaches, have enforced private property of water resources” (Rios and Quiroz, 1995:2). In other words, the balance was broken as “in 1967 the Agrarian Reform Law swung the pendulum toward greatly expanded governmental private rights; 24 years later the Chilean military government swung the pendulum to the opposite extreme, where it remains to this day” (Bauer, 2004:31).

In the end, the Water Code of 1967 was not fully implemented. Even though formal public control over hydrological resources facilitated the process of expropriation of both land and water rights during the last years of Eduardo Frei’s administration and while Salvador Allende was in power, the social and political polarisation (particularly under Allende’s administration) of that time disrupted efforts to affect changes (Bauer, 1998, Bauer, 2004, Hearne and Donoso, 2005). In any event, the Pinochet dictatorship rejected the main principles of the 1967 Water Code, arguing that “the rights of individuals over water reserved or established in agreement with the law, will grant to their holders the property over them” (Southgate and Figueroa, 2006:84). This regime thereafter introduced the concept of private property into the Constitutional Commission of 1976, and reintroduced markets in the Decree Law 2.603 of 1979, both of which were then fully integrated into the 1981 Water Code (Bauer, 1998, Bjornlund and McKay, 2002).

The 1981 Code is still valid today and enshrines free market water economics to facilitate efficient resource use and secure property rights under competitive conditions (Bauer, 1997, Budds, 2004). Indeed, the 1981 Code is unique in South America in that it allows extraction of water supplies (both surficial and ground) under strict market rules (Bauer, 2004), while obviating environmental safeguards. In turn, it has been a significant factor in the consolidation of private ownership of water rights, having established the market as the

main mechanism for both allocation and distribution of water (Alicera et al., 1999). Yet, some scholars believe that through its provisions, the impact of large-scale extractive activities (such as mining) and the lack of control over water markets have increased water scarcity and contamination in many areas (Orrego, 2002, Gentes, 2003).

There are also a variety of practical and administrative elements within this 1981 Code that are of particular interest to this research. On the one hand, the Code separates water rights from land ownership and these rights can be freely traded, mortgaged and transferred, even though they are governed by civil law (Bauer, 1998, Bjornlund and McKay, 2002, Budds, 2004). Within this application, future transfers should respond to market rules (Bauer, 2004). Indeed, applications for new water rights are not conditional on the type of use, and different water uses do not have priority (Rios and Quiroz, 1995), obviating a number of environmental safeguards and protections while also undermining the recognition of local priorities and claims (Molina, 2012).

On the other hand, this Code distinguishes between consumptive and non-consumptive rights. While “consumptive water rights allow for full consumption of the water, which means that downstream users have no right to return flow (...), non-consumptive rights are mainly for power generation, and the holder of such rights must return the water to the river in a way that does not damage the rights of other users” (Bjornlund and McKay, 2002:775). Yet, the distinction between these two types of consumption has failed in practice when coordinating water use and resolving river basin conflicts, and has only increased private speculation, hoarding and the monopoly of water rights. Recently, this has been partially addressed by reforms to the Code of 2005 within the Law N° 20.017, which force water right owners who have not put their rights to concrete use to pay an annual fee to the State (Bauer, 2008).

From an institutional perspective there are several changes within this Code. Within the Water Code there are three levels of water-user associations that play the key role in distributing water and regulating its ‘correct’ use by members: “ ‘*Juntas de Vigilancia*’ which are supervisory committees in charge of monitoring the use of ‘natural’ sources of water such as rivers; ‘*Asociaciones de canalistas*’ which are associations of canal users, usually in charge of administering primary infrastructure such as dams and main irrigation channels; and ‘*Comunidades de Agua*’, which are local ‘water’ communities responsible

for secondary infrastructure, such as distribution channels” (Rios and Quiroz, 1995:3). With the exception of the latter, these associations are allowed to take out collective loans as they have a collective legal status (Rios and Quiroz, 1995). Water management falls to these three associations, which have failed to solve internal conflicts and encourage users’ participation and dialogue (Gentes, 2001). Indeed, they have demonstrated management incapacities to control water use and to obtain funding, due to the lack of government financial resources (Pena and Brown, 2003).

Reform of the 1981 Water Code has been a long and controversial affair. Initiatives began in 1990 but only materialised 15 years later (Bauer, 2008). “Over that period the scope of the government’s proposed reforms narrowed steadily in response to strong political opposition from conservative political parties and private sector business interests” (Bauer, 2008:7). In short, the new reform provided only incremental improvements focusing on water rights information and better record keeping; strengthening management of groundwater usage; strengthening the DGA’s authority to grant new water rights (not existing rights); and recognising the principle of “minimum ecological flow.”⁸ The only substantive reform was, as mentioned above, regarding payment on unused portions of water rights to avoid speculation and hoarding (Bauer, 2008, Jenks, 2009).

For the purposes of this research, then, it can be observed that water management in Chile still relies heavily on the market, although the role of the State remains. This situation, as noted, is a significant issue in the modern history of water use in the country. As will be discussed, a market-driven water regime in turn has profound consequences for water access by indigenous people.

4.3. INDIGENOUS GROUPS IN CHILE

Official recognition of indigenous groups in Chile is a recent process. During the 19th and 20th centuries, the State had promoted the notion of ‘*Chilenidad*’ (Chileanness), which notably had refused to recognise the separate existence of indigenous groups, thereby marginalising certain ethnic groups (Aguilar et al., 2010). Although both the governments of Eduardo Frei Montalva (1964-1970) and Salvador Allende (1970-1973) promoted ambitious national land reform with the intention of thereby restoring thousands of

⁸ An expression to define the water needed to preserve the ecological value of rivers.

hectares that had originally belonged to indigenous groups, such as the Mapuche people in the south of the country, historical legacies of land injustice and political marginalisation of indigenous groups were once more heightened upon the arrival to power of Pinochet (Rodriguez and Carruthers, 2008). The same situation occurred in northern Chile, of interest here, regarding the annexed territories after the War of the Pacific; no law seriously considered the ancestral property of indigenous groups that belonged both to the Province of Antofagasta and Tarapacá until the creation of the Indigenous Law 19.253 in 1993 (Barros, 2004).

This Law was a historic event for indigenous groups. First, it formally recognised the following groups: the Mapuche; Aymara; Rapa Nui; the Atacameño, Quechuas, Diaguitas and Collas communities of the north; as well as the Kawashkar and Yamana communities of the south. Indeed, they were seen as ethnic groups that were an essential part of the nation's roots (Art 1. Indigenous Law 1993). This landmark event represented a key outcome of the CEPI (Special Commission for Indigenous People), created by President Patricio Alwyn in May 1990 with the aim of developing a new State relationship with indigenous communities, and comprising both indigenous and government representatives (Rodriguez and Carruthers, 2008). Indeed, the 1993 Law created CONADI (National Corporation for Indigenous Development) to promote indigenous culture and development, and to administer the 'Land and Water Fund' for the buying and transferring of land back to indigenous groups. In this sense, "after so many decades of betrayal and broken promises [based on land injustice and political marginalization], it is easy to imagine how CEPI, the Indigenous Law, CONADI, and the Fund generated high hopes and great expectations among many indigenous people" (Rodriguez and Carruthers, 2008:5).

Yet, although all indigenous groups were recognised under the 1993 Indigenous Law, their reaction to the new context was shaped by their group particularities. Thus, for example, while the Mapuche always showed their dissatisfaction with the '*chilenizacion*' process, establishing networks with other actors and participating in legal workshops designed to combat it (Rodriguez and Carruthers, 2008), the Atacameño were less combative and more ambiguous about defining their claims. Indeed, even before Pinochet, the Atacameño had adopted State initiatives of integration thereby assuming their status as 'regular' Chilean citizens (Gundermann, 2003).

Yet the application of the 1981 Water Code adversely affected the Atacameño, prompting a new interest in promoting resistance to it via ethno-identity affirmations. Hence, it is an element of great interest to this research. Ancestral and collective water uses were incorporated into a free market, as noted, in a manner that did not consider local customs, ecosystem dynamics, or notions of territoriality, based on a collective worldview (Gentes, 2001). The creation of the '*Comunidades de Agua*', under which water rights belonged to each member individually which encouraged communitarian water management, was modified allowing for the alienation of individual rights, as occurred in the village of Chiu-Chiu (see section 4.5) (Cuadra, 2000, Gentes, 2001). In addition, after the passage of the 1981 Code, the Atacameño communities re-registered their rights, but only achieved enrolment of a small portion of their ancestral claims due to official manipulation, which prioritised mining use and potable water. Thus, these communities recuperated only a third of the water rights they had previously enjoyed in the Loa River, their principal water source (Yañez and Molina, 2011).

Indeed, the ancestral presence of the Atacameño in the northern region of Chile was not considered as an element of positive interest by the State until the 1990s. National cultural processes and narratives had instilled in the Atacameño the idea that being indigenous –or '*indio*'– was something negative (Gundermann, 2002, Ayala, 2009), although the roots of what would become Atacameño Society had begun both on the '*Salar de Atacama*' (Atacama salt flat) and on the Loa valley approximately eleven thousand years prior (Nuñez, 2002). However, the return to Democracy in 1990 changed the historical dynamics between the State and the indigenous groups entirely: "From 1990s, and onward, the Chilean State has found itself in a process of reconfiguration, since the old discourse of national identity oriented toward the control and suppression of cultural differences has been left behind, moving to a multicultural and pluralist discourse that not only promotes diversity but also constructs" (Ayala, 2011:109). Indigenous groups appeared as social actors with increasing power, progressively claiming cultural recognition and access to natural resources within their territory (Ayala, 2011). This also applied to the Atacameño, whereby the process of appropriation and resignification of their cultural heritage occurred via interaction with academics (mainly archaeologists), NGOs and State authorities (Gundermann, 2000, Ayala, 2009). Thus, there was a change "from policies of denial, integration, and assimilation (...) to policies of recognition and promotion of ethnic diversity" (Ayala, 2011:109).

Yet such changes failed to meet all expectations. First, the law only allowed indigenous groups to organise as individual communities, denying thereby the possibility of developing larger organisations, such as confederations. This gap in the law effectively disenfranchises some individuals. Thus, although there are a large number of non-territorial associations between urban indigenous migrants, they do not enjoy territorial representation (Barros, 2004). Second, CONADI has been unable to fulfil the expectations that the indigenous groups have placed on it, particularly when representing them against other actors. Above all, “when indigenous demands ran counter to (powerful) industrial and development interests, state agencies and policies perpetuated the Pinochet-era pattern of siding with the private companies against the expressed interests of indigenous communities” (Rodriguez and Carruthers, 2008:7). Third, CONADI, in their mission to build indigenous communities, has encouraged the fragmentation of indigenous groups as a key requirement for the transfer of economic aid. This is because in order to create a community, the Law only requires a minimum of ten people over the age of 18 (Castro, 2003).

Nevertheless, the government of Ricardo Lagos (2000-2006) sought to improve the relationship between the State and indigenous groups. On becoming president in March 2000, he thus promised more attention to indigenous demands. Consequently, “he increased CONADI’s budget (...), raised the number of indigenous councillors (to eleven (...)), and launched the ‘Historical Truth and New Deal Commission’ to make recommendations for indigenous constitutional recognition and self-determination” (Rodriguez and Carruthers, 2008:14). He also created a special organism named the “Origins Program” (that began in 2001 funded by the Inter-American Development Bank) to develop several measures focusing on the elaboration of productive, social, educational and health initiatives, and the strengthening of Mapuche, Atacameño and Aymara communities in rural villages (Castro, 2003). Yet these efforts failed to effect major change, as the creation of “institutional mechanisms to grant constitutional recognition, self-determination, and a voice in regional land and development policies (...) faded in the shadow of administrative problems” (Rodriguez and Carruthers, 2008)

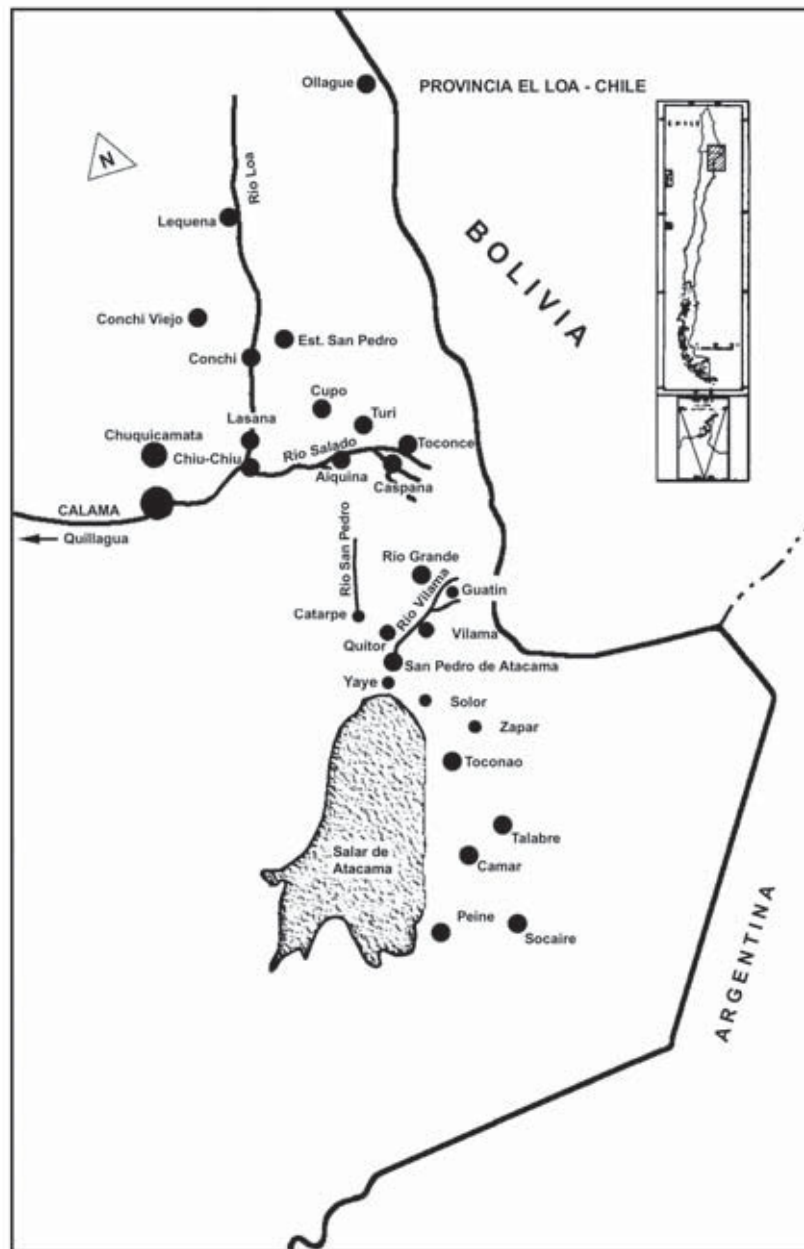
Initiatives during Michelle Bachelet’s Government (2006-2010) were similarly ineffective. The creation of the Plan “Re-Knowing: Social Pact for Multiculturalism” in April 2008

considered several initiatives to ensure compliance with Government commitments to indigenous groups. Institutional reforms were proposed, and special programmes to restore water and land rights were developed (Ministry of Planning and Cooperation, 2008). However, indigenous organisations expressed feelings of exclusion surrounding the decision-making processes, questioning as well the plan's subsequent application. In particular, critics have argued that the Water Code of 1981 (reformed in 2005) and the Mining Code of 1983 have continued to favour the appropriation of water and mineral resources by private companies, affecting the value of traditional lands of indigenous groups, such as the Atacameño (Anaya, 2009), despite the ratification of the ILO (International Labour Organisation) 169 Convention on Indigenous and Tribal Peoples in Chile in September 2008.

This ratification was a step forward, but it has not been fully implemented. While it enshrines the right to consultation relating to the exploitation and alienation of traditional or ancestral territory and associated natural resources, giving fresh hope to the Atacameño people in regards to their land and water access (Molina, 2012), the Convention is crucially not part of the 'Constitutionality Block.'⁹ Hence, it has been reduced to merely a process of basic participation and consultation, and has not become an effective tool for claiming land and water rights (Yañez and Molina, 2011). Indeed, those Atacameño communities who delineated their territory during the 1990s, as required by the State, are still having problems with the transfer process of land and water rights, as it has been slow and fragmented, a process compounded by the lack of political will from politicians in front of mounting pressure from the mining sector (Yañez and Molina, 2008, Yañez and Molina, 2011).

⁹ The application does not consider components that involve constitutional changes (Yañez and Molina 2011).

Figure 4.1 Area of Study. II Region of Antofagasta



Source: Uribe (2002)

Despite the problems that the Atacameño have faced, they have nonetheless been able to maintain ancestral occupation of parts of their territory (see Figure 4.1). Currently, Atacameño communities are distributed from the headwater of the Loa River in the north to the southern end of the 'Salar de Atacama' (Castro and Martínez, 1996). Their total population represents 8.74 per cent of the overall population in the Loa province,, followed by the Quechua (1.26) and the Aymara (0.94) (National Institute of Statistics, 2002). As a

way of adapting to State initiatives and the increasing presence of mining companies in the region, Atacameño groups have diversified their economy. Consequently, it is common to find Atacameños working as farmers, shepherds, miners, clerks of public and private institutions and organisations, as well as business owners and tenants (Gundermann, 2002, Ayala, 2009). In total, 25 indigenous communities have been developed in rural villages recognised by the municipal districts of Calama and San Pedro.¹⁰ Although some of them show fragmentation and/or experience difficulty in leadership (Barros, 2004, Zapata, 2004), in general terms they are demanding “the right to conserve and foster their culture and strengthen their identity through recognition, respect and encouragement of their traditions and their historical and cultural patrimony” (Blanco and Bustos, 2009:7).

4.4. CODELCO’S PROFILE AND CHUQUICAMATA PROJECT

As mentioned in section 4.1, copper has been vital to both the economic growth and development of Chile. Chile holds almost 35 per cent of the world’s copper reserves and currently is one of the largest producers (Garcia et al., 2001). This trend began in the 1850s and 1860s, despite Chile’s distance from major markets (Palma, 2001), consolidating in the mid-1870s at which point Chile was supplying more than 60 per cent of the world’s copper requirements (Bravo, 1976). Since the Global Crisis of 1930, copper has acquired a special place in the public debate. Since then, each government has introduced specific initiatives aimed at obtaining the highest possible return in economic, social and political terms (Bravo, 1976, Vegara, 2004). Indeed, the US-owned mining companies that belonged to the *Gran Minería*¹¹ (Big mining companies), the Kennecott Corporation (owner of El Teniente) and Anaconda Copper Company (owner of Chuquicamata and El Salvador), have played very important role in Chile’s development.

However, Chile has had to adapt to several industry pressures due to both national and international changes. Although the Chilean Government has increased mining taxes for the *Gran Minería* since 1925, with the intention of contributing to domestic capital, it was

¹⁰ There are 38 Atacameño associations within the municipalities of Calama and San Pedro de Atacama, one of the most important being the ‘*Consejo de Pueblos Atacameños*’ (Council of Atacameño People), as their members are the presidents and delegates of the communities that subscribe to its foundation. Although the associations cannot be considered as community representatives, they have a representation of fact, not legally recognised by the Chilean State (Ayala 2009).

¹¹ Until 1955 the Kennecott Corporation and Anaconda Copper Company were named the *Gran Minería* because of their high volume of production. In 1955, they produced 25,000 metric tons of blister copper (Law 11.828) and in 1965 they increased production to 75,000 metric tons (Law 15575).

only able to obtain a small proportion of the total amount of money earned from its copper exports (Gedicks, 1978). After the end of the Second World War, the instability of international markets increased, and the development of the aluminium industry as a substitute for copper forced the *Gran Minería* to find ways to reduce operational costs and increase efficiency and productivity levels, which in turn affected Chilean salaries (Vegara, 2004). In addition, the exploitation of new mines in other regions of the world in 1950, such as Rhodesia (currently Zambia and Zimbabwe) and the Belgian Congo (currently Democratic Republic of the Congo), posed into a threat to Chilean copper interests. To confront this situation, the Chilean State passed the New Deal Law 11.828 in 1955, whose aim was increasing the inversion, production and industrialisation of copper. This law established a 50 per cent flat tax on earnings, and a 25 per cent tax that would be readjusted according to investment and production levels (Vegara, 2004).

The New Deal was not able to solve Chile's economic problems, and State intervention intensified. Although the New Deal legislation contained concessions based on the assumption that production and new capital outlays would be stimulated, at the end of 1959 neither Anaconda nor Kennecott were concerned about this issue (Gedicks, 1978). In this sense, "the conflict between Chile and the copper companies resulted from the organization of copper production whereby the basic decisions affecting Chilean national development were made by foreign corporate officials according to the needs of the vertically integrated copper companies and not according to the needs of the Chilean economy" (Gedicks, 1978:406). In this context, the president Eduardo Frei Motalva promoted the '*Chilenización del cobre*,' which consisted of the acquisition of a 51 per cent holding in the mining companies, increasing both investment and production. While Kennecott agreed immediately, Anaconda showed a lack of enthusiasm. "Only in 1969, after strong demands for nationalization from the Left (...) did (Eduardo) Frei renew his approach to Anaconda, which then asked to be nationalized with due compensation" (Collier and Sater, 2004:315).

The '*Nacionalización del cobre*' (copper nationalisation) occurred in 1971, and changed the entire economic scenario, therefore constituting an important issue for this research project. On 11 July 1971, the Chilean Congress voted unanimously to modify the Chilean Constitution, authorising the Government to nationalise the three largest copper mining outfits, all-US owned companies in Chile: Anaconda, Kennecott and Cerro (Gedicks,

1978). “The day this amendment was passed is celebrated in Chile as a ‘Day of National Dignity’. President Salvador Allende declared the event Chile's ‘second independence’, referring to the achievement of economic independence that had been denied Chile since its political break from Spain in 1818” (Gedicks, 1978:405). This constitutional reform began a process that culminated in the creation of Codelco (Corporación Nacional del Cobre de Chile; National Corporation of Chilean Copper), conceived as a mining, industrial and commercial State company responsible for operating and managing the mining properties held by State (Codelco, 2012b).

Since the 1970s Codelco has become the main copper producer in the world. Codelco has control of around 10 per cent of the world’s copper reserves and its main business is the exploration, development and exploitation of copper mineral resources, as well as its refining process and commercialisation (Codelco, 2012c). Currently, Codelco has six mining divisions: Radomiro Tomic Division, Chuquibambilla Division, Ministro Hales Division, Salvador Division, Andina Division and El Teniente Division, as well as the Ventanas Smelter and Refinery, and their headquarters is located in the capital, Santiago. Codelco owns other mining companies, such as Minera Gaby S.A. (100%) and El Abra (49%), and maintains mining partnerships both in Chile and abroad (Codelco, 2011). In short, Codelco holds more than U\$ 20.835 billion in assets, and in 2011 its equity totalled U\$ 6.065 billion (Codelco, 2012c).

Thus, the importance of Codelco to the Chilean State is well established. The contribution of Codelco to the Chilean Treasury is significant, as it is by far the largest contributor. Indeed, during the 1980s Codelco was not privatised because it continued to generate 85 per cent of export earnings (Cortes, 2012). Moreover, during the last 20 years it has on average contributed 13.5 per cent of all national tax revenues, through both its profits and taxes, with a contribution of 34.2 per cent of national tax revenue in 1990 (the year Chile returned to democracy), and 33.4 per cent and 25.6 per cent in 2006 and 2007 respectively, due to the high metal prices during the government of Michelle Bachelet, allowing for the expansion of national spending on welfare, pensions and education (Arellano, 2011). The 1990s was a decade of unprecedented expansion in the Chilean copper industry as a result of an increase in the world copper demand, although most of it was privately driven due to the emergence of new firms from both developed and developing countries (Folchi, 2003). While in 1990 the industry was still largely state-

owned, with Codelco dominating exports at 71.6 per cent, in 1999 Codelco's share fell to just 36.3 per cent (Altamirano, 2001). Nevertheless, it has continued to be essential to national economic growth (Arellano, 2011).

Codelco is also the owner of the world's largest open cast copper mine, Chuquicamata. Located in the Loa Province in the Atacama Desert,¹² Chuquicamata was traditionally exploited by indigenous groups before the Tiwanaku period (100 to 900 AC).¹³ However, the inception of commercial mining began with the operations of the Chile Exploration Company (owned by the New York-based Guggenheim family) in 1910 and continued under the US Anaconda Copper Company from 1923 until the constitutional reforms of July 1971, when the industry was nationalised (Gedicks, 1978, Molina, 2012). Currently, the Chuquicamata division has two open-pit mines, 'Chuquicamata' and 'Mina Sur', and produces approximately 528,377 tonnes of electrorefined and electrowon copper cathodes, as well as about 10,760 metric tonnes of fine molybdenum and by-products, such as anode slimes and sulphuric acid (Codelco, 2012a). Chuquicamata had profits of US\$ 1,200 million in 2011, although in 2012 profits were expected to decline to only US\$ 400 million due to an increase in production costs and a reduction in 'ore grade' (Lagos, 2012).

One of the big challenges that Chuquicamata has had to face has to do with water access in one of the driest places on earth. As a mine of great magnitude, Chuquicamata needs a large volume of water in a region where annual rainfall is only around 200 millimetres per year (Yañez and Molina, 2011). Therefore, it has obtained water rights to the Loa River and its tributaries, a unique water source in the province; the mine currently holds rights to a third of the river volume (Molina, 2006). According to Carrasco (2011), Codelco holds legal titles to water for a total of 3,870 litres per second, in the Loa Province alone, of which 2,107 litres are subject to payment for non-use according to the Law N° 20.017 of 2005 (Carrasco, 2011). Indeed, after members of the Atacameño community of Chiu-Chiu declared the Loa River dry in the year 2000, Codelco began to demand rights to the groundwater that supports the Loa River. This was the case for Pampa Puno, a project developed by Codelco to extract 400 litres per second from the High Basin of the Loa

¹² Radomiro Tomic Division and Ministro Hales Division are also located in El Loa Province.

¹³ In 1899 a mummified human body was found impregnated with copper salts, and in 1978 Carbon-14 dating of the clothes and body indicated an age of 550 AC, confirming a historical indigenous presence (Fuller, 2004)

River, for the purpose of supplying the expansion of Chuquicamata (Yáñez and Molina, 2008), indicating that water access continues to be a major issue.

Thus, the relationship between Chuquicamata and the indigenous groups that live in the Loa Province is particularly strained. The “presence of arsenic in air, water and consumed food is higher in northern Chile than elsewhere in the country” (Orihuela, 2010:5), to which Chuquicamata has contributed since 1952 with its copper smelter (Rivara et al., 1997), has affected the quality of life in the indigenous communities surrounding the mining. However, water scarcity remains the main problem for these communities, as it affects their sustainability and traditional activities. In this sense, one of the largest issues for them is that Codelco has stripped water rights from the indigenous communities of El Loa Province, generating a reduction in their cultivated land and increasing migration to urban centres (Yáñez and Molina, 2008).

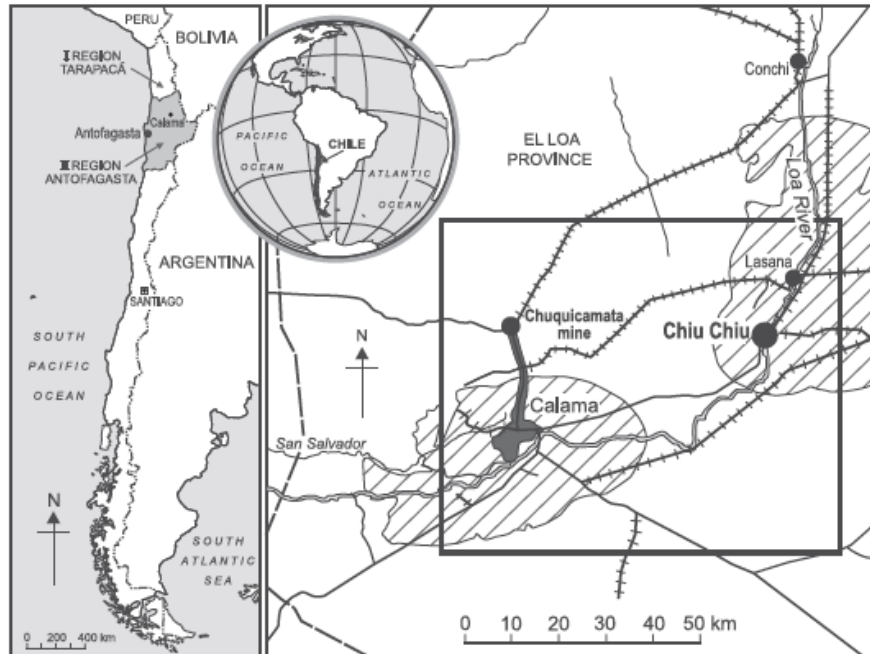
In this context, Codelco CSR (Corporate Social Responsibility) initiatives have not met the increasing community demands. Codelco says that sustainability is a strategic priority, along with the safety and health of every worker, socially responsible behaviour, mitigating environmental impacts and contributing to neighbouring communities (Codelco, 2012d). Indeed, regarding water resources, Codelco has promoted several initiatives to improve its efficiency in the management of water withdrawal, use and recirculation, such as exploring the desalination of seawater to reduce their traditional consumption (Codelco, 2011). Despite this, problems regarding water scarcity remain unresolved in several indigenous communities in the Loa Province, including the indigenous community of Chiu-Chiu.

4.5. PROFILE OF THE INDIGENOUS COMMUNITY OF CHIU-CHIU

The village of Chiu-Chiu is part of the Municipality of Calama, in the Loa Province, II Region of Antofagasta (See Figure 4.2). This village is an oasis located 30 km from the City of Calama, 2,525 metres above sea level. It extends into the basin of the Loa River a few kilometres from the junction with its tributary the Salado River, in the so-called Upper Loa Depression. Chiu-Chiu is a rural village in the middle of the Atacama Desert, and historically has been oriented toward agriculture, particularly the production of carrots and beetroot, and to a lesser extent, livestock (Molina, 2009). Although the National Census of 2002 indicated a total of 481 inhabitants (National Institute of Statistics, 2002), currently

the number of inhabitants is closer to 1,000 due to the arrival of members of the Aymara ethnicity, and contract workers in mining and public works (Indigenous Leader 1 [Male, middle-aged adult] 2011).

Figure 4.2 Location of Chiu-Chiu



Source: Molina, 2012

The village of Chiu-Chiu is predominantly Atacameño. The constitution of the Atacameño ethnicity both on the '*Salar de Atacama*' and on the Loa valley has shown that the current Loa Province is the territory of the Atacameño ethnicity (Nuñez, 2002). In fact, the village of Chiu-Chiu was considered strategically relevant by this indigenous group, as it was a rich place for hunting animals and gathering wild food at the junction of the Loa and Salado rivers (Nuñez, 1992). Also, Atacameño members have made ancestral use of agriculture, which is demonstrated in several irrigation channels, some of them prehispanic, that carry water to terraces, pastures and meadows in the villages along the Loa River (Cuadra, 2000, Gentes, 2001, Yañez and Molina, 2011). According to the National Census of 2002, the ethnic composition of this village was distributed as follows: 66.53% Atacameño, 13.10% Aymara and 1.04% Quechua (National Institute of Statistics, 2002).

Officially this village is recognised for its Atacameño character. Their ancestral connections to this arid land, their relatively high population density and consequently high dependence on water resources are all officially noted by CONADI, the National Indigenous Development Corporation created under Indigenous Law 19.253 (see section 4.3). In fact, the Atacameño community of Chiu-Chiu was legally established in 1995 by 327 members (Ayala, 2009). Currently, the community has 500 members living both in the city of Calama and in Chiu-Chiu (Indigenous Leader 1 [Male, middle-aged adult] 2012), and belongs to the Indigenous Development Area of Alto el Loa, an initiative carried out under Art. 26, Law No. 19.25 dated October 1995, that defined geographical areas in which State institutions are responsible for improving the life of indigenous people (Molina, 2012). This organisation is the strongest in the village of Chiu-Chiu, even stronger than the Neighbourhood Council, which was created earlier (in 1971) but whose functions have been relegated to only social and educational initiatives, and not to major community issues such as water and land (Indigenous leader 6 [Male, *ancianos*] 2012).

However, the application of the Water Code of 1981 had already affected the future of the Atacameño community of Chiu-Chiu, and therefore is a crucial element of this research. Although this community had historically developed agricultural and cultural activities based in the Loa River (main watercourse of the Province), after the application of the Water Code in 1984 this community began to lose access to a large quantity of its water rights, as “most indigenous communities were unaware of the need to officially register their century-old customary rights” (Boelens and Zwarteveen, 2005:747). In fact, the community of Chiu-Chiu, as well as other communities such as Quillagua, Lasana and Calama, were told to register only water rights that were being used for agricultural purposes, and not the ones that were not being used, under the threat that they would have to pay additional taxes (Indigenous Leader 2 [Female, Middle-aged adult], 2011).

Although this community applied for recognition of their traditional water rights under the 1993 Indigenous Law, they were not able to change this situation. This community tried to register their ancestral water rights with the Governments of El Loa and Antofagasta but the military authorities did not recognise their ancestral use of the territory, and hence reduced their water rights considerably. Consequently, Chiu-Chiu’s water rights were officially deemed to be ‘unused rights’ that could be allocated to other sectors by submitting an official request – something chiefly solicited by companies in the water-

intensive mining sector (Yañez and Molina, 2011). Thus, after the registration of the water rights of the Loa River, residents of Chiu-Chiu had only secured 97 litres per second, which represents a significant loss compared to their original flow. In this context, they were allowed to irrigate only during the day and had to redirect water into the river during the night, in order to ensure that downstream communities, Calama and Quillagua, were able to continue agricultural production (Molina, 2006).

This resolution directly benefited Codelco, since they were awarded a significant portion of these water rights, causing its relations with this community to become strained. The reallocation of water rights engendered water conflict by pitting the operations and interests of a profitable state-controlled transnational mining company against the agricultural production activities of a small place-based indigenous community, including the main watercourse, the Loa River (Yañez and Molina, 2011). In fact, two thirds of the water rights of the Loa River belong to large companies such as Codelco (Chuquicamata Division), the private utility company Aguas Antofagasta S.A, the lithium company SQM and the railway FCAB. Therefore, residents Chiu-Chiu, as well as the communities of Calama, Lasana and Quillagua, are against the installation of the '*Junta de Vigilancia*' of the Loa River, as big companies will have control of the water and its distribution. This illustrates their concern for further reduction of water for agriculture (Yañez and Molina, 2011) and is deepening the conflict scenario.

Although Chiu-Chiu has been able to augment their water rights, thanks to CONADI's Fund of Land and Water, and now has access to 230.2 litres per second, which they share with the nearby Atacameño community of Lasana (DGA, 2009). This quantity of water is still considered insufficient when taking into account increasing foreign migration and the aridity of the desert (Indigenous Leader 3 [Female, *anciano*] 2012). According to the Ministry of Agriculture, of the 227 potentially arable acres in Chiu-Chiu, inhabitants cultivate only 77.5 per cent of the land, mainly due to water scarcity affecting them that has prevented further growth (Ministry of Agriculture, 2008), and livestock activity has fallen sharply because of the dryness of wetlands and meadows (Molina, 2009). In short, access to water rights of the Loa River by the Atacameño community of Chiu-Chiu, as well as other indigenous communities, is marginal.

4.6. SUMMARY

The aim of this chapter has been to set out the socio-political background and context for the Atacameño role in Chile's struggles over water resource management. While the first section contains a brief analysis of the political economy of Chile, the second section analyses water resource management in Chile since Independence in 1818 to today, describing the changes in water legislation and the tension between public orientation and private ownership. The third section develops an overview of indigenous people, notably the Atacameño people, the historical processes they have lived through since the 19th century and their problems regarding land and water rights. The fourth section continues with a description of Codelco, the TNC involved in the case study, and the Chuquicamata project. Finally, it develops a profile of the Atacameño community of Chiu-Chiu and how the current Water Code has affected them, especially in relation to the reallocation of water rights to Codelco. In short, this discussion has set the scene for the detailed empirical analyses that follow.

CHAPTER 5. INTERGENERATIONAL DYNAMICS AND LOCAL DEVELOPMENT

Juanito Panire quiere aprender a tocar Zampoña (...) y su mamá no lo quería dejar, sólo quería que fuera a pastorear, y su papá no lo quería dejar, sólo quería que fuera a cultivar.

Juanito Panire wanted to learn how to play Zampoña (...) but his mother wouldn't let him, she only wanted him to become a shepherd, and his father wouldn't let him, he only wanted him to cultivate the land.

Juanito Panire, Pat Ta Hoiri Musical Group, Chiu-Chiu, Chile..

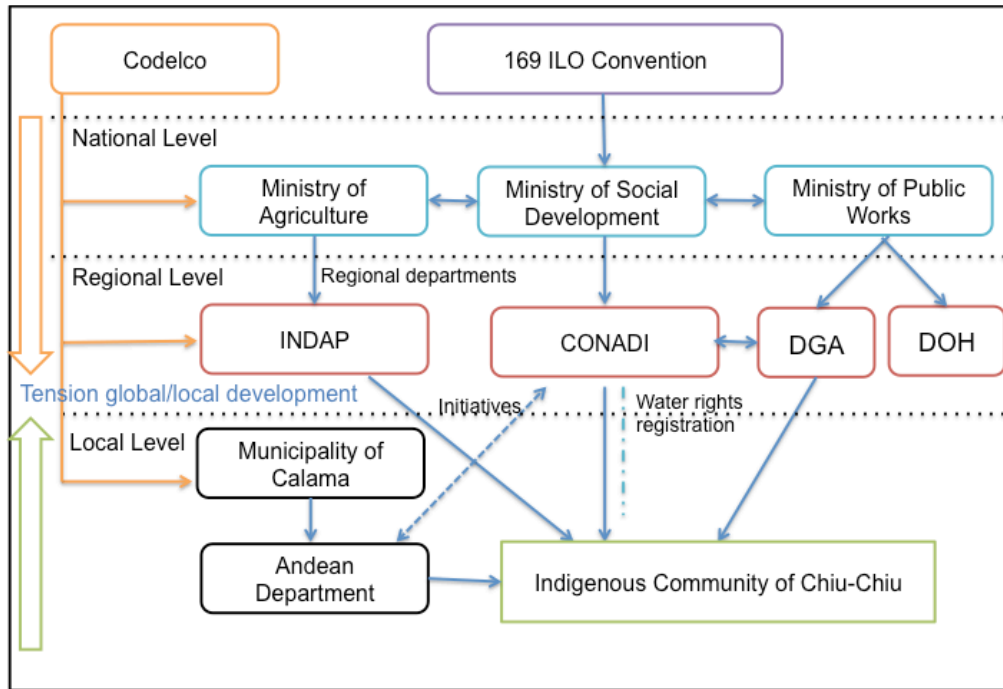
The aim of this chapter is to assess in what ways Intergenerational Dynamics (hereafter IGDs) shape how an indigenous community articulates its collective vision of development, including the sense of territoriality. Specifically, it analyses to what extent IGDs shape the key elements that constitute the Indigenous Community of Chiu-Chiu's meanings of local development and different positions regarding territory (section 5.1) and the way these positions are articulated in defining community economic priorities (section 5.2). This chapter also assesses how such dynamics reflect age-related traditional interests and cultural senses of identity and territoriality (section 5.3). Therefore, this chapter is central to the research as it contributes to an understanding of how indigenous communities are internally differentiated, reflecting how age-related interests contribute to distinctive and not always compatible community rationalities.

5.1 DEVELOPMENT PLANS AND RATIONALITIES

There are different conceptions about nature and development in the village of Chiu-Chiu, as elsewhere. From a political ecology perspective, conflicts over access and control of natural resources (Allier, 2002) constitute a situation that includes differentiated thinking regarding nature, and territoriality (Peet and Watts, 2004). This is the case affecting the Indigenous Community of Chiu-Chiu, where different discourses from government agencies, large corporations, NGOs (Non-Governmental Organisations), and communities are in constant confrontation, as socio-natural spaces reflect outcomes of human action that are historically defined and socially constructed (Escobar, 2008). Indeed, when historically analysing the situation over the water conflict that this community has been facing with Codelco and other companies over the last 50 years, it is possible to see empirically how extra-local actors, such as big corporations and government agencies (at the regional and national level), hold positions on nature that do not coincide with the ideas

of development promoted by many locals, embodying unequal power relations and a reductionist view of territory (Molina, 2012).

Figure 5.1 Diagram of the tension between global and local development



Source: author.

Thus, the reality facing the Indigenous Community of Chiu-Chiu is a landscape built on multiple definitions, as well as constant interactions with other powerful actors. While conducting ethnographic research for this work, specifically in the cities of Santiago, Antofagasta and Calama, it was possible to see how each actor studied held differing positions as to the most appropriate form of development in these communities. In other words, the dialectic between global and local development¹⁴ (see Figure 5.1) was a daily practice, whereby this community had to respond to various stimuli, inevitably affecting their local agendas (Andolina et al., 2009). Notable here are governmental agencies at the national and regional level that highlight the fact that Region of Antofagasta is viewed as a place solely for mining interests: “The second region of Antofagasta is a mining district” (National authority 2, 2012). This statement has acquired special relevance over the last five years, as the presence of large natural resource corporations has increased in the

¹⁴ For the purposes of this research, and considering that Chile has a centralized planning system, the regional level was considered part of the ‘global level’ as it follows the same course as the national level, when dealing with TNCs.

country. According to the projections of COCHILCO (Chilean Commission of Copper) Chile is predicted to experience an increase in copper production as well as in other minerals of 33 per cent by 2020 (COCHILCO, 2012). Yet the quantity of water necessary to respond to this growth has generated resistance, increasing the tension between global and local forms of development.

This tension between global and local development will be explained here through the lens of IGDs, as such experiences affect different age groups differently (Miller, 2000, Edmunds and Turner, 2002). Therefore the historical processes briefly described in Chapter 4 are analysed below to show how the tensions between the democratic and dictatorial periods over the last 50 years have defined policies that have changed communitarian usage of natural resources in the Indigenous Community of Chiu-Chiu. In particular, IGDs are analysed in order to show how different forms of development within this community have developed as a consequence of neoliberal policies regarding natural resources, especially the Water Code of 1981. In addition, it analyses the influence of this process (as well as others, such as the Indigenous Law of 1993 and the ILO -International Labour Organisation- Convention of 2009) on the different ways that various age groups relate to shifting local understandings of development and definitions of territoriality.

Thus, the three age groups that will be analysed here, as well as in the next two chapters, will be compared based on the year they 'came of age' (18 years old) in relation to the historical processes indicated above. This choice recognizes that both the experience of age and the process of ageing are subject to historical and cultural process (Wyn and White, 1997): (1) the 'ancianos' constitute a group composed of members who were 59 years or older in 2011, that is who came of age before the dictatorship of Pinochet and the Water Code of 1981; (2) 'middle-aged adults' are composed of members of this community between 42 and 58 years old, representing men and women who came of age during the dictatorship of Pinochet and prior to the Indigenous Law of 1993; and (3) the 'younger generation' are members of the community between 18 and 41 years of age, men and women who came of age within the return to democracy, hence under the 'New Deal' that the democratic government established with indigenous groups.

5.1.1 The old days were better: 'Land preparation'

The *ancianos* identified two main elements that have affected the welfare of the community over recent years. The first one has to do with how the application of the 1981 Water Code redefined the way that members of the community interact with water. As they argue, formerly the ownership of water was something symbolic that ancestrally belonged to the community, but the new Water Code changed the entire system and the concept of 'private property' took precedence. Indeed, the separation of land ownership and water rights ruined the hundreds of acres that were used for both agriculture and livestock: "Nowadays there are lands that are abandoned because there is no water to irrigate them. There is no water [at all]" (Indigenous leader 3 [Female, *ancianos*], 2011). The second element concerns the way the influence of money affected the social cohesion of the community. After the formal constitution of the Indigenous Community of Chiu-Chiu in 1995, this organisation began negotiations with large corporations operating in the area, such as Codelco, El Abra Mining, Quadra and Collahuasi. These negotiations resulted not only in improvements in infrastructure and social programmes (such as educational scholarships and trainee programmes) but also in money for the community as a result of local-based business. For *ancianos* this situation has hampered community relations, as money has been used as a means of co-optation both inside and outside the village. Thus, in response, *ancianos* have tended to be wary of the impact of money: "Chiu-Chiu will be surrounded by mining companies, it will have a large amount of money. But be careful because there will be no place to buy [goods].... agriculture will disappear" (Indigenous representative 6 [Female, *ancianos*], 2012).

This group does not understand development in economic terms, as other age groups of the community do. Although there are nuances in the way that *ancianos* understand local development in terms of productive choices, all of them agree that materialism per se is not the path they would choose for the community. As one man says, development is deeply linked with identity: [It has to do with] "defending what is ours, our land, because it is ours (...) and believe always that my grandfather sacrificed [himself] to conquer the desert (...) I feel that and I vibrate with that" (Indigenous leader 10 [Male, *ancianos*], 2012). From an IGDs perspective, while *ancianos* represent a group that does not claim to have many aspirations in economic terms, other age groups are more inclined to understand development and economic growth interchangeably. Indeed, some members of this group

believe that the other generations are thus not aware of the importance of natural resources for 'development with identity.' "It's what people must understand. Without water we are nothing.... people in the village have life, that life is because of water" (Indigenous leader 6 [Male, *ancianos*], 2012). Following this reasoning, some *ancianos* disagree with the younger generation of the community who have started to focus more on superficial elements due to external stimuli: "They want to have a fancy car, bank accounts, a nice house, ergo materialism" (Indigenous leader 6 [Male, *ancianos*], 2012). Nevertheless, during the fieldwork, *ancianos* would often argue that global pressure has affected the younger generation so strongly, mainly because middle-age adults have abandoned their role of passing on essential values of development, which for the *ancianos* lie in respect for the territory (Indigenous representative 6 [Female, *ancianos*], 2012).

In contrast, the notion of development that the *ancianos* have promoted represents "development *with* identity" (Indigenous leader 6 [Male, *ancianos*], 2012). This is a way of development that recognises territory as an indivisible unit that includes both water and land, therefore rejecting the reductionism that the 1981 Water Code promoted and applied after 1984. Following former water codes elaborated during democracy (1951 and 1967 within the Agrarian Reform), they maintain that water and land should not have been considered as separate units, as the sustainability of the village was thereby put into question. In this regard, they demonstrate greater ideological proximity to the 1993 Indigenous Law, particularly Articles 64 and 65, which advocate the recovery of water rights for indigenous communities (Ministry of Planning and Cooperation, 1993) whereby they invite the other generations to return to agriculture, as it constitutes an important heritage: "People must return to farming, even to roots, as the hunger will be great. Land [with its water] is the best heritage that a man can have. It has no price" (Indigenous leader 6 [Male, *ancianos*], 2012). In addition to the Indigenous Law, *ancianos* in the community also believe that the 169 ILO Convention will become an important tool to push State authorities to reconsider territory as an indivisible unit. Even though both the Indigenous Law and ILO Convention have acquired relevance over the last couple of years, national laws such as the 1981 Water Code and the 1983 Mining Code have not allowed their full application. On the contrary, the latter has facilitated the growing influence of large corporations in the area, permitting them to operate relatively freely. Indeed, national authorities have begun to try and control expectations that this age group have built up concerning the Convention, portraying its role as merely tool of consultation, in a move

clearly calculated to downplay it: “We have noticed that there is a lack of knowledge regarding the 169 ILO Convention in the indigenous communities, as they believe that it will solve all the historical problems they have” (National Authority 2, 2012).

Photo 5.1 Agricultural lands surrounding the village of Chiu-Chiu, Calama



Source: Author. November 2011.

The result has been tension between the *ancianos* and State authorities at all levels (national/regional and local). Aside from the lack of importance that national authorities have afforded the 169 ILO Convention, other official practices have pointed to a neglect of *ancianos*' related concerns. Thus, regional authorities such as INDAP (Institute of Agricultural Development) and CONADI (National Corporation for Indigenous Development) have been unable to help local communities face the complex weather conditions typical in the area, as can be seen in Photo 5.1, that combine terrain dryness and water scarcity: “Land here only gives what is underground, that is carrot and beetroot. (...) Down to 16 and 15 degrees below zero there is no plant that can resist” (Indigenous leader 3 [Female, *ancianos*], 2011). Indeed, *ancianos* feel that authorities (especially the Ministry of Agriculture) have not shown enough skill and experience in the area, and have developed initiatives that require inappropriate levels of production, considering the hostile growing conditions: “Here climate is different (...) here it is very difficult to work (...) I make jokes with them and say (...) the person you are sending don't know about this type of work” (Indigenous representative 2, [Male, *ancianos*], 2011). Neither the regional nor local authorities (the Municipality of Calama) even acknowledge that overuse of water for mining is exacerbating the problem of water scarcity on local agriculture. Subsequently, they have

argued that their production cannot be measured only in economic terms, as the authorities commonly do, without considering the traditional and symbolic meanings embodied therein. In short, although some *ancianos* are not working in agriculture anymore due to personal difficulties such as fatigue and/or illnesses, they still believe that 'development with identity' lies in not losing traditional ways of production. However, they recognise that it is not an issue for the regional authorities, which can be seen in the irony shown when these authorities talk about the role that mining should play: "This is a country of miners which is governed by farmers that legislate looking to the South" (Regional authority 3, 2012).

This precarious situation that has affected agriculture and thus the *ancianos*' conception of development has caused divisions within the community itself. When talking about the way the middle-age adults and the younger generation understand development and the role of territory, *ancianos* express anger about the way these age groups address the difficulties they are facing due to water scarcity, and are especially critical of the younger generation: "[This group] has changed, they don't respect, as we were taught to respect '*Pachamama*', Mother Earth as our grandfathers told us" (Indigenous representative 6, [Female, *ancianos*] 2012). When asked about the changes that should take place in the community, *ancianos* agree that the village should 'stay the same,' demonstrating that for them development is a state of peace and calmness. As one woman says, life for them is simple and the only thing they do not want to see is a village full of people and without greenery: "I wish Chiu-Chiu stays the same. I would not like a bigger or more crowded village. I like it just as it is" (Indigenous leader 3 [Female, *ancianos*], 2011). In fact, informal interviews demonstrated that although *ancianos* are aware that water scarcity (due to overuse of water by large corporations) has almost killed all local livestock, and that surely agriculture will follow the same trend, they refuse to accept that agriculture in Chiu-Chiu will die. Consequently, they continue to believe that things will improve for them and see in the 169 ILO Convention a real possibility to change structural laws and norms that have historically affected their welfare (Indigenous Leader 6 [Male, *ancianos*], 2012).

In short, the *ancianos*' vision of development is strongly linked to territory mainly because agriculture has been the main activity of their lives. For them, life starts and ends with agriculture; therefore, water and land are two elements that cannot be divided. In this sense, the application of the Water Code deeply affected their perspectives and

opportunities, as it represents a State initiative that was designed to improve national and foreign investment in mining rather than attend to the situation of smallholders. Indeed, some of them feel that they were misled, as they did not have sufficient education and information to challenge that process (Indigenous leader 6 [Male, *ancianos*], 2012). Concerning the 1993 Indigenous Law, they believe it is a great initiative by the *Concertación* (Coalition of Parties for Democracy) that has mainly benefited the younger generation and the middle-age adults of the community. Due to their age, there is a lack of opportunities for them today; hence they are not direct beneficiaries of the initiatives defined within this Law. However, they believe that the fact that they have continued to be concerned with agriculture (and the inseparability of land and water) has been crucial for the recognition of the Atacameño by the Indigenous Law. It could be said that since they empirically showed their dependence on natural resources, in effect they ‘laid the groundwork’ for the recognition of the village’s claims and demands.

5.1.2 Against the odds: ‘Searching for new benefits’

The ‘middle-aged adults’ (community members between 42 and 58 years old in 2011), believe that achieving development means fighting against the odds, given the very powerful actors they know that confront them. In particular, they have suffered consequences since the application of the 1981 Water Code, especially regarding the current lack of economic opportunities for members of the community. They have seen how growing water scarcity (due to the actions of large corporations and State authorities) has weakened local development prospects. Thus, they have sought to negotiate with external actors, as it appears to be the best way to maximise benefits (Indigenous leader 1 [Male, middle-aged adult], 2011). The fact that the *ancianos* were unaware of the need to officially register their water rights following the application of the Water Code in 1984 and the threat of taxation to which they were thereby exposed by government agencies (see Chapter 4), became the impetus for the middle-aged adults’ participation in the community board: “The government explained to *ancianos* about the Water Code but they didn’t understand (...) there was no democratic process and participation. Take it or lose it” (Indigenous leader 8 [Male, middle-aged adult], 2012). Here IGDs come to the fore in shaping community actions, as the middle-aged adults assumed the right to lead the external negotiations, and hence speak for the community, when the *ancianos* were shown to be unprepared in dealing with external actors.

Thus the application of the Water Code affected the middle-aged adults' perspective of development, which is mainly based on having increased access to infrastructure in the village. Unlike the *ancianos*, it is common to hear the middle-aged adults arguing that Chiu-Chiu cannot be considered a developed village, as it lacks basic infrastructure such as an appropriate sewage system: "One of our duties is to analyse the sewage system. I have my proposal (...) not only as Chiu-Chiu but with Lasana, the two villages together asking for the sewage system to have increased capacity" (Indigenous leader 4 [Male, middle-aged adult], 2012). In this regard, this age group is critical of the way that the Municipality of Calama is dealing with their problems, because their investment is precarious and not designed to consider the village's actual situation: "We depend on the Municipality of Calama and that's the reason why we are underdeveloped (...) Money does not arrive here. (...) They installed septic tanks thinking of families of 2 or 3 people, but in my house we are 12" (Indigenous leader 1 [Male, middle-aged adult], 2011). Indeed, they believe that the local authorities are answerable to the national and regional levels and therefore some of the practices that they are developing are not always in accordance with local needs (Indigenous leader 8 [Male, middle-aged adult], 2012). These contrasts with the view that the municipal authorities have regarding local participation, where consultation processes are considered crucial for successful initiatives. Indeed, they have always fought against removing citizen participation, as they believe that they "only implement and build the projects but the important ones are those who inhabit them" (Municipal authority 3, 2012).

The contrasting position between this age group and the local authorities lies in the role that the Andean Department (which belongs to the Municipality of Calama) has had in the village. Although the role of this department is based on working with the indigenous communities of the Loa Province to improve their social conditions through development projects and programmes (Municipal authority 7, 2012), they have shown limited autonomy in designing and implementing their own initiatives because they depend on the Municipality of Calama for funding (Indigenous leader 8 [Male, middle-aged adult] 2012). Members of this age group (as well as some *ancianos*) agree on the need to diversify agriculture, as Chiu-Chiu is a community that strongly depends on carrot production (see Chapter 4). However, they have not found enough support from this department, as initiatives regarding water and land are not a priority at other levels. Like the *ancianos*, the

discontent of this age group has escalated to both a regional and national level, mainly because of the economic growth that the region of Antofagasta (and Chile in general) have experienced in recent years. Antofagasta's ascendance to becoming one of the richest regions in the country has not been seen or felt at the local level: "The discontent has always been alive as it is the richest region of Chile but [we continue to be] the poorest" (Indigenous leader 1, [Male, middle aged-adult], 2011).

Although the welfare of the region and the presence of large corporations has allowed locals access to modern elements such as mobile phones and the Internet, they agree that it is not enough considering the economic growth that the region has experienced due to mining and the environmental impacts that they have been suffering. Indeed, they make a distinction between development and modernity, arguing that only the latter has arrived in the town: "What we need is development for the village. We have modernity. We don't have to confuse modernity with development. We have mobile phone, TV" (Indigenous leader 1 [Male, middle-aged adult], 2011). Therefore, they claim that infrastructure improvements are crucial for the village's development, as they will allow for new economic ventures. Having electricity 24 hours a day has allowed evening trading activities to improve their welfare (as can be seen in Photo 5.2), and has pushed this age group to ask for/expect other basic services such as domestic water (especially for new members of the community) and an appropriate sewage system, as mentioned previously.

Photo 5.2 Electricity allows evening trading



Source: Author. November 2011.

The notion of development that middle-age adults promote, therefore, could be called “development with amenities” (Indigenous leader 1, [Male, middle-aged adult], 2011) that seeks to capitalise on their ethnic and geographic conditions. This notion stems from the fact that using the opportunities that their indigenous status provides them is considered the most important development tool at their disposal: “With the creation of the Indigenous Law leaders of the community are the protagonists” (Indigenous leader 8, [Male, middle-aged adult], 2011). Focusing on a territoriality based on living in the community rather than on working the land, some leaders of this age group are constantly searching for new projects and initiatives, not only for themselves but also for younger generations, arguing that *ancianos* have less perspective on development, as they only know how to work in agriculture. When analysing IGDs, it can be seen how middle-aged adults view their role as one of struggling with municipal authorities and large corporations in order to obtain improvements for the community, snatching opportunities as they might appear. They are therefore pushing for the local authorities to build a technical high school in the village oriented toward mining, in order to encourage people to remain in the village “Regrettably, we have to learn to live with our neighbours and we are surrounded by mining. A technical high school oriented toward agriculture is not useful” (Indigenous leader 4 [Male, middle-aged adult] 2012).

Hence, some middle-aged adults believe that having a high school in the village will contribute to their development, as, at present, they have to send their children to Calama to attend high school, essentially forcing them to migrate: “I will not leave my child to be alone in Calama being a ‘new bird’. He will be eaten. There are many more risks” (Indigenous leader 1 [Male, middle-aged adult], 2011). *Ancianos*, meanwhile, also believe that having a local school will help the younger generation to connect with the village, arguing that in the city they receive a different type of education: “There are differences because the youth is being prepared to compete, to own money, they are not being prepared to develop their values and identity, that is the problem with education [in Calama]” (Indigenous leader 6 [Male, *ancianos*] 2012). The IGDs demonstrate that *ancianos* are also concerned about the youth; they are concerned that they are being prepared to compete in the ‘Western world’ instead of acquiring tools to defend their roots (Indigenous leader 6 [Male, *ancianos*] 2012). This contrasts with the views of CONADI members on the educational initiatives they are promoting, arguing rather that they are

orientated to reviving the traditional values and perspectives of development that the Atacameño used to have: “CONADI at this moment is dedicated to providing projects in order to revitalise language, culture in general” (Regional authority 1, 2012).

Thus, it could be said that, for middle-aged adults, development is less focused on agriculture and more focused on a multifaceted understanding of territory. In fact, agriculture appears to be only one of several possibilities they have among others such as tourism and mining: “I have that vision [that does not see mining and agriculture as incompatible] (...) [and] I took the course on [becoming a] mining equipment operator” (Indigenous leader 1 [Male, middle-aged adult], 2011). However, this age group is nevertheless worried about the difficulties that agriculture faces as a consequence of the 1981 Water Code, as it highlights the disadvantages that the village suffered notably before the application of the 1993 Indigenous Law. Consequently, members of this age group who hold leadership positions have begun to study this ‘dark episode’ of their history, developing an ‘official discourse’ as to the consequences of the application of this Code: “In the 80s the Loa River’s flow was even greater than 2,200 m³. If at that time there were 21 tributaries, in the year 2001 there were only 7. If we go today we will find only 4” (Indigenous leader 8 [Male, middle-aged adult] 2012). In addition, they have started to convey to the authorities, at different levels, the current difficulties with the Loa River and the internal differences that water scarcity has caused within members of the community: “Currently we have only the water they left us, not the one we need. The amount of water we need today in Chiu-Chiu is double the amount we have” (Indigenous leader 8 [Male, middle-aged adult] 2012). In short, this discourse has been used as a negotiation tool based on the importance of preserving the multifaceted welfare of the village. Also, it gives them the chance to demonstrate that Chiu-Chiu is a village that deserves compensation, due to the environmental impacts that large corporations have generated with the approval of the State over the years (Indigenous leader 1 [Male, middle-aged adult], 2011).

In summary, the middle-aged adults’ vision of development is based on seeking out all possibilities that the 1993 Indigenous Law grants them. The idea of negotiating and making deals with both State authorities and large corporations is crucial for their development and, therefore, the sustainability of the village. Indeed, this age group argues that this law gave them new means to negotiate with other actors: “When the Indigenous Law was created the main actors were no longer the mayors, but the leaders of the

communities” (Indigenous leader 8 [Male, middle-aged adult], 2012). Consequently, middle-aged adults have started to put pressure on authorities at various levels to promote development not only based on agriculture, but also on other activities such as mining and tourism in a way that benefits the residents of Chiu-Chiu. In short, they have ‘planted the seeds’ during the last 20 years and now, under the 169 ILO Convention, they truly believe the community will be able to obtain increased benefits because the Convention ought to grant them even more political leverage than before (Indigenous leader 4 [Male, middle-aged adult], 2012).

5.1.3 The crucial position of the younger generation

The younger generation, members of the community 18 to 41 years old in the year 2011, is a group that has radically rejected old ideas of development linked only to agriculture. This can be seen in some members of this group who appears to be less aware of the details of the application of the 1981 Water Code, although they appear to be conscious of the consequences that the village has suffered regarding this issue: “Water is like white gold here in the North” (Indigenous representative 4 [Male, younger generation], 2012). For various reasons, members of this age group observe that agriculture has lost the socio-natural conception that *ancianos* currently give to this activity, due to market pressure. The fact that agriculture is mainly subsistence work and therefore does not have formal contracts, has affected the state of agricultural workers’ health and pensions, increasing their vulnerability, as can be seen with the *ancianos*. Therefore, young members of the community agree that to work in agriculture you need a solid economic background, as you need to invest in both technology and equipment in order to be competitive: “I believe that only a few will dedicate themselves to agriculture (...) you have to invest and dedicate one hundred per cent to it” (Indigenous representative 4 [Male, younger generation], 2012).

Therefore, their concept of development is not focused on agriculture, like the *ancianos*’ view, or on necessarily opening up new possibilities, like the middle-aged adults’ perspective, but is focused on having all the opportunities to decide what to do with their future, above all through educational tools. In this way, they believe that belonging to an indigenous community is not an obstacle, but rather provides a sea of opportunities, especially if they have enough information to back their claims: “I can have a programme

and negotiate with arguments that we have a lack of water (...) We can do it, with our own resources, with community work, but the (crucial) thing is to say (...) I don't have water, here is the information" (Indigenous leader 11 [Male, younger generation], 2012). Although they are aware that the Water Code did not respect their position during the 1980s, the Indigenous Law and the 169 ILO Convention have become vehicles to proclaim their indigenous status and to gain access to new opportunities such as scholarships (Indigenous representative 4 [Male, younger generation], 2012). Hence, they have started to realise that since they have increased their education level (more access to secondary school, technical programmes and even universities) and have had more access to information about environmental issues that are affecting them, they can also fight for the best conditions for the village (Indigenous leader 11 [Male, younger generation], 2012). Consequently, they have started to follow the middle-aged adults' idea of development when talking about the possibilities that other activities such as mining and tourism can provide: "I have a different way of seeing things today. I think my parents, grandparents had another vision of things (...) Times are changing. (...) I only see agriculture as a subsistence activity but not for projection (as a business)" (Indigenous representative 4 [Male, younger generation], 2012).

The younger generation's notion of development can therefore be seen as 'development with integration' (Indigenous representative 4 [Male, younger generation], 2012). The importance of territory for this age group is not seen in terms of having a piece of land, but in their symbolic relation with it. Some members of this group believe that agriculture is not necessarily a bad activity, but the conditions in which it is being developed in Chiu-Chiu are not attractive to them. They agree that *ancianos* had better conditions when they were younger, and that due to water scarcity those conditions are not the same. Indeed, some of them argue that 30 years ago one acre of land cost 2 million Chilean pesos but now it is close to 35 million, making the activity unfeasible and forcing them to share land with their family: "I plant the land of both my mother-in-law and my father, but no, (this land) is not mine" (Indigenous representative 4 [Male, younger generation] 2012). In addition, they agree that members of the community used to have better internal relations before the application of the 1981 Water Code and therefore they avoid participating in community meetings: "Now all the people have bad relations. The village is divided. After the (State) cheated us, it changed everything" (Indigenous representative 1 [Male, younger generation] 2011). Still, they have a special connection with Chiu-Chiu that is based on the

cultural heritage of the village that has been passed down mainly by the *ancianos*, but integrating the middle-aged adults' idea of being open to other activities, as, for the younger generation, development has to do with what the place symbolises and not with the activity that they are developing (as with agriculture for *ancianos*). This can be seen in the testimony of a young member of the community who says, "For me Chiu-Chiu is my home" (Indigenous representative 1 [Male, younger generation], 2011).

The rationale of the younger generation is to define an idea of development that endorses territory at a cultural level, without necessarily being seated in agriculture, therefore integrating the importance given to it by the *ancianos* and the openness to other activities that middle-aged adults have promoted in the village. Through IGDs it can be seen that the youth appear to be a bridge between the *ancianos*' and the middle-aged adults' arguments. On the one hand, it is possible to see young members of the community who are dedicated to agriculture and livestock demonstrating a socio-natural discourse closely related to the *ancianos*' ideas about development: "I have my family here (...) I went to study (...) and now I have come back. You could say that I am a shepherd. I have sheep, llamas" (Indigenous representative 1 [Male, younger generation], 2011). However, this is not a common trend in Chiu-Chiu, as the youth that are working in the village belong to a small segment of the community who did not lose their water rights with the application of the Water Code and therefore have rights to at least a proportion of water on land (Indigenous representative 1 [Male, younger generation], 2011). On the other hand, there are youth that live in other cities of the region who are dedicated to mining, showing a mind-set closer to that of the middle-aged adults, as they have prioritised new activities instead of continuing to work in the village. Despite their activity, it is clear that these youth believe that Chiu-Chiu is their 'place' and that local roots are crucial for development in accordance with their indigenous status. As can be seen in Photo 5.3, elements such as music, dance and theatre have acquired more importance for this age group, as they are expressions of maintenance of their culture and the tools to demonstrate that their heritage need not be related to the productive activity that they choose (Indigenous representative 9 [Female, younger generation] 2012).

Photo 5.3 Youth parade in the centre of the village



Source: Author, November 2011

The fact that their notion of development is not linked to a single traditional productive activity, such as agriculture, has allowed them to move more easily within the region than their *ancianos*. Currently young members of the community travel all over the region, working in large corporations and/or studying in cities (Indigenous representative 9 [Female, younger generation] 2012). Members of this age group believe that they must use the increasing opportunities that historical processes such as the 1993 Indigenous Law and the ratification of the 169 ILO Convention in 2009 have begun to provide them. IGDs demonstrate how this age group shows respect for the work that in different ways both the *ancianos* and the middle-aged adults have developed over the last 50 years for the welfare of the community: “I have a lot of respect for [an anciano leader], he is a person that has taught me a lot” (Indigenous leader 11 [Male, younger generation], 2012). Despite the benefits that this group holds, *ancianos* nonetheless insist that the young generation is not prepared to confront the challenges the community is facing, as they predict that Chiu-Chiu will continue to have problems because they are more vulnerable to the pressure of large corporations, just as the middle-aged adults: “Youth and [middle-aged] adults get excited about money or a job (...). Ancianos are cleaner and not contaminated” (Indigenous leader 6 [Male, ancianos], 2012).

To sum up, it is important to say that the position the younger generation holds is crucial for the way the village of Chiu-Chiu will develop. Indeed, the role of this group and their stance regarding water resources has started to become particularly relevant, as the pressure from large corporations has increased in the last few years (Municipal authority 3,

2012). The big challenge that this age group is facing has to do with the consequences that their openness to new educational and labour opportunities may have for the village (Civil Society 4, 2012). First, it should be noted that the quantity of cultivatable terrain has decreased over the last 100 years in the Loa Province due to overuse of water (Civil Society 4, 2012). Second, youth migration is a problem that is affecting all Atacameño villages in the Loa Province. In fact, both the Municipality of Calama and CONADI are very concerned with the prospect of depopulated towns, as occurred in this area with Cupo and Taira (Municipal authority 3, 2012). In short, the way the younger generation considers these two issues when using 'their opportunities' will be crucial for the development and sustainability of the village.

5.2 ECONOMIC PRIORITIES AND LABOUR EXPECTATIONS

This section analyses how IGDs condition the way members of the Indigenous Community of Chiu-Chiu articulate their specific economic priorities, considering that economic priorities and consumption relations may diverge. It therefore contributes to the overall discussion of this research, as it reflects on how age-related issues help to define different micro-level economic priorities and labour expectations, and their relation with broader development plans and viewpoints analysed in the previous section. It is noted that a number of socio-economic events have occurred during the last 50 years (see Chapter 4) that have redefined economic dynamics and introduced capitalist relations to agriculture (Civil Society 4, 2012). In the case of Chiu-Chiu, higher living standards as well as sophisticated market trends have modified the selection of productive activities and the factors that activate those decisions (Civil Society 4, 2012). In addition, the commodification of natural resources, especially water, due to the application of the 1981 Water Code has redefined their symbolic importance, and enhanced their relevance in economic terms to State authorities (Bauer, 2004, Budds, 2004), opening new possibilities for development linked to other activities, such as tourism and/or mining. Finally, an increase in initiatives designed by State authorities for indigenous groups under the 1993 Indigenous Law have experienced a lack of implementation at the local level, in addition to the paternalistic CRS (Corporate Social Responsibility) initiatives carried out by large corporate programmes (See Coldeco's initiatives in Chapter 6).

In many ways, these episodes have marked the way that members of the community interact with the market and therefore with other actors. The rise of neoliberalism in the

1980s broke sharply with old ideas of livelihood production based on relative local harmony with natural resources, and promoted a 'rational' way of understanding nature as objects and means of production (Leff, 2004). In this way, the consolidation of the mining industry in the region has inevitably affected the relationship this community has with water, as members of the community had never seen water as a business before: "*Ancianos* never saw water as a business until mining came to offer a large amount of money" (Indigenous leader 11 [Male, younger generation], 2012). These companies started to use water without consideration of ecosystem dynamics (Carrasco and Fernández, 2009), disregarding the fact that extraction would affect both biodiversity and the indigenous community's quality of life (Molina, 2012).

Although the State authorities have promoted initiatives to help indigenous communities' adapt to economic changes, such as grants and soft loans, the communities have faced obstacles that are beyond their capacity to solve. The economic prioritisation of mining, and therefore the ensuing scarcity of water in the region, has defined an economic system that threatens their way of subsistence, impoverishing indigenous communities and generating a relationship of dependency with State authorities, mainly CONADI (Civil society 4, 2012). However despite the recent efforts of the Chilean State to support indigenous communities, notably with the Indigenous Law and the 169 ILO Convention, it has not been enough; Chile still has a Water Code that defines the water resources of all rivers (including the Loa River) as private property and thereby legitimates interventions that disregard territorial requirements embodied by indigenous claims.

In this context, analysing economic priorities and consumption relations through IGDs helps to identify possible differences within the indigenous community of Chiu-Chiu concerning local development, and how different generations have been adversely affected by the intervention of State authorities and large corporations. Unlike the previous section, which was mainly about overall rationalities, this section analyses IGDs in relation to specific economic issues to show how they impact the development plans and viewpoints analysed above, thereby reflecting on how neoliberal pressure through the market system has contributed to reinforcing distinctive community positions at the micro level.

5.2.1 Beyond economic growth: the role of agriculture

As mentioned, new economic dynamics were established in the village of Chiu-Chiu after the 1980s due to the increased competition for water access with the mining companies. *Ancianos* saw various changes to their production methods and also redefined their agriculture in terms of market demand. Nowadays, this age group is dedicated mainly to the production of carrots, as producing other vegetables has become very difficult due to fierce competition: “Carrots are what I produced because others are dedicated to other vegetables and there is great competition” (Indigenous representative 2 [Male, *ancianos*] 2011).¹⁵ Therefore, this group has developed a somewhat vulnerable agriculture that follows monoculture practices and uses more water rights than the ones they officially registered for under the 1981 Water Code (Molina, 2006). However, they insist on producing only carrots, as they are familiar with their commercialisation due to the networks they have in Calama and beyond. Indeed, the fact that they have historical (informal) links with members of different markets in Calama (who would travel directly to the village to purchase and collect their seasonal produce) has given them a bit of stability. It has allowed them to continue to live in contact with their land, as shown in the testimony of a woman, talking about an old farmer who passed away a few years prior: “The only thing he wanted was to have his land, his carrots. He lived with that” (Indigenous representative 6 [Female, *ancianos*] 2012).

The carefully delimited economic aspirations of the *ancianos* concerning agriculture contrasts sharply with the initiatives that INDAP and the Municipality of Calama are developing at the local level to promote economic growth. Although these authorities agree that Chiu-Chiu, as well as other indigenous communities in the Loa River region, hold a great deal of knowledge regarding agricultural production, they insist that *ancianos* do not have the ambition to be more competitive and hence do not understand the initiatives they are promoting: “They defend their sector and are not open to new technologies (...) It’s good that they want to rescue their traditional roots but vanguard is crucial in today’s market” (Municipal authority 1, 2012). It could be argued that these authorities are bewildered as they do not understand the reasons why this age group shows no interest in exploiting all the comparative advantages that Chiu-Chiu has because of its location near

¹⁵ Although the Atacameño communities located in the Loa Province used to have diversity in their agrarian production, the rise of capitalist dynamics based on longer distance trade forced these communities to respond to the market demands of cities such as Antofagasta and Iquique through greater local specialisation (Civil Society 4, 2012).

to Calama: “They are not interested in supplying the overdemand (of other vegetables) (...) That is what we need to change” (Municipal authority 1, 2012). Thus, the *ancianos* have not been ‘bought off’ by consumer items as many adults and youth have been. Indeed, the role of organisations such as INDAP has generated tension with this age group as they feel that neither local nor regional/national authorities understand their traditional knowledge and the challenges that they have to face daily: “It’s not good for me to say it but sometimes we know more than them” (Indigenous representative 2 [Male, *ancianos*] 2011).

This state of tension is based on the fact that *ancianos* believe that State initiatives, such as soft loans and technical assistance, are more concerned with broad economic indicators that satisfy bureaucratic programme requirements than the welfare of the communities. An example of this trend can be seen in the tourism initiatives that CONADI is promoting, arguing that the Loa Province should follow the openness to foreign investment that San Pedro de Atacama has had over the last 25 years in order to exploit this activity (Regional authority 2, 2012). However, the touristic potential of Chiu-Chiu is viewed with resentment by members of this age group, especially women. They are afraid of seeing the village becoming a small version of San Pedro de Atacama; a village that is entirely dependent on tourism and is at the mercy of market forces: “San Pedro de Atacama is too big. Tourism is not managed by the community (of San Pedro de Atacama). It’s only foreign people who came with money, bought everything and installed. The guy from San Pedro couldn’t do that because he didn’t have the resources” (Indigenous representative 3 [Female, *ancianos*] 2012). In addition, the *ancianos* point out that tourist companies that are operating both in Calama and San Pedro de Atacama are not concerned about the indigenous communities, and therefore deal directly with the tourists without asking their opinion. In this regard, some women of the community believe that local authorities have not intervened and the only thing that they did in this matter was to hire a member of the community to take care of opening of the church, the main attraction of the village (Indigenous leader 3 [Female, middle-aged adult] 2011).

Considering the perceived effects that tourism has had in San Pedro de Atacama and the environmental impacts that mining has in that community, agriculture appears to be the best solution to safeguard the community. Some *ancianos* argue that 50 years ago the community was very close-knit. They helped each other in the sowing periods and formed

groups to transport their vegetables, mainly beetroot and carrots, by truck to the city of Calama. As can be seen in Photo 5.4 the old community truck is not used anymore and symbolises the dying off of a way of life that was once full of community support. In this regard, some *ancianos* believe that things have changed and now that the community has money, because of an agreement with 'Quadra Mining'¹⁶ for extraction of groundwater, the relationships between them are getting worse.¹⁷ Women are even more radical: "Money divides, water puts together (...) We have to search for things that put us together" (Indigenous leader 7 [Female, *ancianos*] 2012). They feel resignation about how an activity that was so good for community relations is now dying. They believe that other generations still intend to continue with agriculture, as it is the main tool for development. But since the other age groups do not own both the land and water they do not have real opportunities to expand arable lands in the village. In this sense, IGDs are particularly important as some *ancianos*, and middle-aged adults have had to divide their land in order to allow new generations to plant, considerably affecting their annual income and generating different social classes within the community: "I have my land and I plant, but if I give part of it to my grandsons my production will decrease" (Indigenous representative 2 [Male, *ancianos*] 2011).

Photo 5.4 Old truck used by the community to transport their vegetables



Source: Author. November 2011

¹⁶ Quadra FNX Mining Ltd. is a Canadian company that produces and explores for copper, nickel, platinum, palladium, gold, cobalt and molybdenum with operations in Chile, Nevada and Arizona, among others. In December 2011 it was acquired by KGHM Polska Miedz S.A., for further information see: <http://www.quadrafnx.com/>.

¹⁷ There is no clarity on when the agreement was conceived, however community members said it was in the early 2000s. Even now there are some *ancianos* who are still against this agreement.

The *ancianos* are thus a group that have been quite adversely affected by market forces. Although agriculture continues, capitalist relations and State initiatives shape its pathway more and more (Civil Society 4, 2012). This has generated tension with the *ancianos*, who refuse to alter their economic priorities and consumption relations, or to enter into the regional competitiveness that State authorities have promoted. Indeed, it can be seen that this group faces a number of challenges to preserve their ancestral practices (for instance irrigation), as it is less profitable in the market (Indigenous leader 6 [Male, *ancianos*], 2012). This is evident in how municipal authorities have focused their initiatives: “We need a public and private platform to do a continuous intervention, with training to achieve a change in their cultural system, conserving only their central elements” (Municipal authority 1, 2012).

5.2.2 Mixing and matching: Agriculture, tourism and mining

Middle-aged adults of the community, in contrast, have the idea that diversifying their activity is the best way to confront the complexities that they are suffering, notably regarding water. In this sense, they believe that agriculture is not the only option for success. For them, the possibility of working in mining or developing tourism activities can guarantee better economic conditions for the community. Therefore it is common to see middle-aged adults who are dedicated to both agriculture and tourism and even to agriculture and mining, believing that they have to use the market possibilities regarding their indigenous situation. For example, one former leader has been both claiming land for the community with State authorities, and doing business with mining companies: “Today I have in (my) folder 36,000 acres (on demand) (...) to be transferred to Chiu-Chiu (...) I am submitting about 200 million pesos (due to external negotiations with mining)” (Indigenous leader 8 [Male, middle-aged adult] 2012). In fact, they agree that generating networks with large corporations has opened up new possibilities for development, not only for them but also for the younger generations, who in their opinion are willing to find new labour possibilities and to remain in the village: “So I don’t have migration of people (...) so that my son maybe tomorrow will be working (in a mining company) (...) that kid will not leave here” (Indigenous leader 1 [Male, middle-aged adult] 2011).

However, it is also common to see middle-aged adults dedicated to agriculture, following the way that the *ancianos* produced and consumed. Indeed, as they usually share the land within their family and the property titles of the land belong to the *ancianos*, some of them still do not have enough independence to make their own decisions, as access to land is unequally distributed across generations. Therefore, most of them follow the informal trade practices of the *ancianos*, generating networks with members of different markets in Calama and beyond: “I work with my dad and we sell to people that have rotating positions at street markets and in the agricultural terminal (...) We have worked with them for 8 years” (Indigenous leader 1 [Male, middle-aged adult] 2011). Also, they have informal arrangements within the community regarding how regional markets will be covered. For instance, some producers cover the cities of Calama and Antofagasta (the main cities in the region) while others focus on the cities in other regions such as Iquique and Arica. Some of the middle-aged adults who work in agriculture also follow monoculture practices, while others have tried to diversify their production with new technologies such as greenhouse systems and drip irrigation (Indigenous leader 1 [Male, middle-aged adult] 2011). However, the results of these investments have not been positive, as they have failed to cover the initial investments.

In general, middle-aged adults are more open to the initiatives that the State has developed at the local level, as they are based on calculations of relative economic benefits rather than an underlying philosophical opposition. For instance, the role of INDAP is viewed positively, as it gives credit with low-interest rates for the purchase of fertilizer and seeds (Indigenous leader 1 [Male, middle-aged adult] 2011). Although some middle-aged adults agree that institutions like INDAP and SAG (Agricultural and Livestock Service) support *ancianos* continued work in agriculture, they think that production is no longer profitable as the land is damaged because of the poor water quality due to the contamination by the tailing dam of Codelco, in Talabre: “Now the quality of the water is bad (...) because of the tailing dam and (...) because of the mining companies that were installed in the area” (Indigenous leader 9 [Male, middle-aged adult] 2012). Therefore, some middle-aged adults estimate that about 50 per cent of the community in this age group is dedicated to agriculture, unlike the *ancianos*, of which almost 100 per cent are dedicated to this activity (Indigenous leader 9 [Male, middle-aged adults] 2012). The decline in agriculture among middle-aged adults has to do with the fact that this age group is trying to exploit opportunities in mining as most of them are at the age limit for hiring:

“[middle-aged] adults are at a turning point as they can find a job out of the community or dedicate themselves full time to agriculture (Indigenous leader 6 [Male, *ancianos*] 2012).

Thus, considering the difficulties with agriculture in the village, middle-aged adults have started to move on to other economic activities. They believe that thanks to all the possibilities that the Indigenous Law provides, the community is in a position to have access to formal careers such as engineering, law and medicine. Also, these careers will improve not only the individual members’ opportunities, but also the community skills to stand up to and negotiate with other actors (Indigenous representative 8 [Male, middle-aged adult] 2012). Indeed, younger members of this group have assumed the lead in the search for opportunities in large corporations that operate within the region, thus to facilitate the incorporation of younger members of the community in the future: “I can do the course (of mining equipment operator) and continue working in shifts of 7 x 7 days. I go for 7 days to the mine and the other 7 days I help my dad to plant” (Indigenous leader 1 [Male, middle-aged adult] 2011). This is also the case for women who work 7-day shifts in the community laundry, complementing that activity with agriculture: “We have two jobs. (...) We have needs (...) my daughters were little but now they are big (...) (the bigger one) will continue studying in Calama” (Indigenous leader 3 [Female, middle-aged adults] 2011).

In fact, the middle-aged adults have started to develop diversified economic priorities and labour expectations based on the opportunities that the shifting market is offering. As the cultivable land has decreased during the last ten years from 600 to 250 acres, they have started to see other economic possibilities as essential to their survival (Indigenous representative 8 [Male, middle-aged adult] 2012). With the intention of both having a better prepared community and youth with more prospects, they have decided to adapt to environmental and social conditions imposed on the village by the large corporations and State authorities and to obtain the maximum benefit from them (Indigenous leader 8 [Male, middle-aged adult] 2012). Therefore, some of them frequently participate in funding initiatives developed by large corporations, as well as in productive development programmes of institutions such as INDAP, CONADI, SAG and the Municipality of Calama at the local level.

5.2.3 Urban education: opportunities beyond the village

The younger generation has different priorities, as they have a different educational background. The idea of success for them is to find opportunities beyond the possibilities that the village currently offers. Therefore young members of the community can be seen finishing professional careers, working in mining companies or holding important positions in the public sector. Although many of the young members of the community are not living in the village because they are working and/or studying in other cities in the region, they are starting to participate more in village meetings and activities. In fact, it is very common on the weekends and during summer vacations to see members of this group participating in community activities such as carnivals (Indigenous leader 10 [Male, younger generation] 2012). For example, during my fieldwork I helped out at Easter and realised how the young members of the community contributed by helping the older leaders with the organisation and management of the community activities. As shown in Photo 5.5, the presence of young members in the main activities developed in the village is very common. While men help *ancianos* move heavy materials and/or do the hard work, women provide support through crafts and ornamentation.

Photo 5.5 Easter activities in the village of Chiu-Chiu



Source: Author. April 2012.

In general terms, working the land is not considered a real possibility for the younger generation anymore. When analysing the dynamics of the youth regarding economic priorities, it can be seen that the great majority do not see their future either in agriculture

or livestock. A few of the young people who decided to stay in the village to dedicate themselves to agriculture agreed that the main reason that most do not is related to the guarantees that mining provides in economic terms: “All of these guys dream of working at Codelco. They only want to have a lot of money and buy a truck. Mining is the easiest way of earning money” (Indigenous representative 1 [Male, younger generation] 2011). However, an *anciano* of the community argues that the main reason that ‘forces’ the younger generation to search for other jobs is the water scarcity that is affecting the village: “With the amount of water that we have there is very little that we can do. There are people that want to plant, but they don’t have water” (Indigenous representative 2 [Male, *ancianos*] 2011). Regarding this issue, the municipal authorities blame the *ancianos* for this situation, arguing that the younger generation do not have the conditions and incentives to work in agriculture because the *ancianos* did not accept all the resources and possibilities that the Municipality of Calama offered them to improve their production, mainly because they felt that it would affect their heritage (Municipal authority 1, 2012). Indeed, the refusal of the *ancianos* to accept new technologies such as drip irrigation has limited possibilities for the *younger generation* to have access to water.

It can be seen from the IGDs that the fact that the labour expectations of most youth have strayed from agriculture has generated some opposition among *ancianos*. Therefore some conservative *ancianos* argue that a crucial aspect of the decoupling of the younger generation from the land has to do with the role of education in urban schools. For this age group, these institutions have affected the priorities and values of the youth, who in their view follow the ideas of neoliberalism: “Young people are being prepared for competition, to make money. They are not being prepared to cultivate their identity values. That is the main problem of education [in general]” (Indigenous leader 6 [Male, *anciano*] 2012). Indeed, some of them agree that it is a generation that seeks materialism, although there are some who care about the land: “What they want is to have a fancy car, bank accounts, a beautiful house, materialism. At least a few have love for their land” (Indigenous leader 6 [Male, *ancianos*] 2012). Although some *ancianos* have this idea about the younger generation, others agree that there are some members of this age group who do care about the village and therefore would prefer a job near the village that allows them to live in Chiu-Chiu, showing differences in the way this group is understood (Indigenous representative 4 [Male, younger generation] 2012). Indeed, some young members of the community insist that they are looking forward to coming back to the village in the future

although they work in cities like Calama: “I live here, yes I live here. I go daily to (Calama)” (Indigenous representative 4 [Male, younger generation] 2012).

The younger generation has started to see the materialisation of the economic perspectives and prospects that middle-aged adults have developed in recent years. This can be seen in the way they have started to expand their economic possibilities in mining companies, mainly because it gives them economic stability. However, this does not mean that they are not aware of the environmental challenges facing the community. On the contrary, young members of the community have started to return to the communities and promote the importance of increasing both their economic and cultural opportunities, in light of the social and environmental problems that are affecting them (Indigenous leader 11 [Male, younger generation] 2012). In this regard, they are also focused on participating in training programmes to understand more about national and international laws that protect them, such as the 169 ILO Convention (Indigenous representative 4 [Male, younger generation] 2012). In short, the younger generation is more educated and therefore more open to taking the opportunities that the market supplies to them. As a young member of the community states: “I believe that a lot of [young] people have returned (to Chiu-Chiu) being professional giving support (...) to the village” (Indigenous leader 11, 2012). Following this trend, young women of the community have become direct beneficiaries of external negotiations, which have given them new opportunities (See Chapter 7).

One of the main reasons why a top priority for this group is to improve their income, has to do with the fact that they have witnessed the difficulties that older members of the community have faced in trying to continue developing agriculture. Because of this, one young member of the community believes that it is not worth continuing to work in an activity that is so poorly paid and that requires so much effort, although some of the younger generation are following their grandparents’ heritage: “There are young that were students and now are working 100 per cent in agriculture” (Indigenous leader 11 [Male, younger generation] 2012). But the trend is different and *ancianos* have started to understand this position, as agriculture does not provide a guarantee to young people: “People here are poor. Agriculture gives you money to eat and dress. I believe that people who have cars have borrowed money from INDAP and are still paying it (...) With agriculture you don’t have anything but \$5,000 that is paid for the bag [of carrots]. You

don't have health service and anything else" (Indigenous leader 3 [Female, *ancianos*] 2011). So the detachment often shown with regard to agriculture does not mean that they do not approve of the link *ancianos* have with their territory and natural resources. Indeed, they have tried to incorporate this cultural heritage, not into productive activity but into the development of art initiatives, such as theatre performances, Andean music bands and books on the history of the community (Indigenous leader 1 [Male, middle-aged adult] 2011), but their indigenous status is not based on their economic priorities and labour expectations as is the case for the *ancianos*.

5.3 THE ROLE OF CULTURE: HERITAGE AND TRANSMISSION

As previously mentioned, the indigenous Community of Chiu-Chiu is considered an Atacameño community. This means that it belongs to a social unit that holds a strong ethnic sense of identity and allows the integration of families that have settled in the village with shared cultural roots (Mondaca et al., 2008). In general terms, it can be argued that from its formal formation in 1995 this community has promoted a socio-natural way of life based on cultural, social and economic definitions of territory (Leff, 1994). However, the water conflict affecting them has highlighted the different ways in which this community has had to struggle internally and against other actors to conserve their heritage and to develop new ways of passing on their identity.

Thus, this ethnic assertion of identity has been truly put under strain by several social and productive initiatives promoted by big corporations and state authorities. This situation too has generated differences within the community. Culture acquires a relevant role when analysing the dialectic between global and local development, as it helps to assess the process of 'glocalisation' developed in Chapter 2 (section 2.3) and the way global development has infiltrated local culture (Andolina et al., 2009). Indeed, studying the role of culture in the Indigenous Community of Chiu-Chiu and understanding their heritage and transmission dynamics, allows for an identification of the extent to which local groups use their traditional practices to differentiate themselves from 'global' actors as a communitarian strategy (Escobar, 2001, Urkidi, 2010).

There are some crucial elements in the way members of the community elaborate their configurations of nature and culture that have been redefined by external actors (Escobar,

2008). Elements such as what it means 'to be an Atacameño,' the role of the Loa River, considered as an iconic place for the community, and the dialectic between tradition and new technologies, have defined new variations in the way members of the community rationalise their relations with nature. Using IGDs it is possible to find similarities and differences in defining their particular knowledge systems and expectations (Bozzano, 2000). The *ancianos*, *middle-aged adults* and the *younger generation* have historical backgrounds that inevitably define different perceptions and distinctions within socio-natural dynamics, involving perceptions that are not necessarily neutral and that respond to the way each group has been linked to social and political processes through history (Gonçalves, 2001).

5.3.1 The roots of the *ancianos*' heritage

For *ancianos*, the crucial requirement for 'being an Atacameño' lies in belonging to a territory. For this age group you are an active member of the community only if you have Atacameño roots, which means being born in an Atacameño area (see Figure 4.1) and/or belonging to an Atacameño family tree. They use this distinction to differentiate themselves from the Aymara who come from the I Region of Tarapaca and only participate in the community as passive members: "As they come from another region, they don't feel the same" (Indigenous leader 6 [Male, *ancianos*] 2012). Indeed, some of them agree that if you are not born in Atacameño territory you cannot lead a community properly, criticising the role that some Aymara want to have in the community: "They argue that they are on the side of natural resources, but ultimately it is not what they pretend to do (...) mainly because they don't have roots with this village as they don't have great-grandparents, grandparents in this place" (Indigenous leader 6 [Male, *ancianos*] 2012). In short, some members of this age group have an essentialised view of social identity (*de facto*) designed to exclude (local) outsiders from having the same benefits that they have.

In addition, the process of transmission is considered an important element to build a collective vision of what it is 'to be an Atacameño'. *Ancianos* consider that the leadership of the community should be held by an 'anciano' person based on their wisdom and experience of the Atacameño identity. Indeed, most of them agree that they have a mission to pass on their knowledge to both middle-aged adults and the younger generation: "Leadership is a long string where the main role is deposited in *ancianos*, as

they have the experience and (...) *Ancianos* must transfer their knowledge to middle-aged adults and to the younger generation” (Indigenous leader 6 [Male, *ancianos*] 2012). Some *ancianos* also agree that this process of transmission has been affected by the arrival of evangelicalism, changing some community dynamics, as it prohibits traditional customs (Indigenous representative 6 [Female, *ancianos*] 2012). As an older member of the community says: “Evangelicalism has entered in a strong way. It prohibits traditional customs, for example the channel cleaning, rain ceremonies and rogations, which is sad. I respect religions but the evangelicalism has deeply affected our communitarian customs” (Indigenous leader 6 [Male, *ancianos*] 2012). In this regard, nowadays the community has members that identify as both Catholics and Evangelicals, the latter being composed of young Atacameño and other ethnic groups such as the Aymara.

When asking about this process of transmission it is clear how the *ancianos* mainly sustain and locate their heritage in the Loa River, which is considered the main source of life in the village (see Photo 5.6). In this sense, the role of place is particularly important for this age group, as it is seen as a symbol of their roots (Indigenous representative 6 [Female, *ancianos*] 2012). Analysing IGDs, it can be argued that *ancianos* believe that the process of transmission has been cut, as some members of the younger generation are not taking care of the Loa River as they used to. Indeed, some *ancianos* suggest that middle-aged adults have also failed in their transmission of the culture, as their youth are less concerned about the current condition of the river. An illustration of this situation can be seen in the way some members of the younger generation interact with the river that, in the eyes of the *ancianos*, is disrespectful. For instance, they say that some young members of the community go to the river to make campfires, damaging the riverbank (Indigenous representative 6 [Female, *ancianos*] 2012), although some members of this age group recognise its importance for tourism: “(The Loa river) is still important, they have made some improvements (...) it is important for tourism” (Indigenous representative 4 [Male, younger generation] 2012).

Photo 5.6 The Loa River



Source: Author. November 2011.

An example of this diagnosis of the *ancianos* can be seen in the traditional activity of 'channel cleaning'. This activity is one of the most important traditions within the Atacameño communities and is based on a ritual that asks for fertile land and an abundance of rain, and includes the cleaning of miles of the canals that bring water to the people (Museo Chileno de Arte Precolombino, 2012). Regarding this activity, some *ancianos* (especially women) agree that the youth do not understand the real meaning of this ritual: "For them it is just to drink and have fun drinking (...) it is not respectful. (...) We used to do this activity respecting its meaning" (Indigenous representative 6 [Female, *ancianos*] 2012). They say that formerly the 'channel cleaning' was a sacred ritual where men and women worked really hard with tools such as shovels and picks. Also, they would arrange a special place with blankets to prepare breakfast, lunch and dinner, as it was a full-day activity. However, nowadays the *ancianos* believe that this situation has changed, misrepresenting its real meaning (Indigenous representative 6 [Female, *ancianos*] 2012).

This situation can also be explained by the fact that the Loa River today provides fewer services than before and the youth do not easily recognise them. Listening to the stories of the *ancianos* of the community, it is common to hear about the problems of water scarcity, because of the overuse of water by Codelco, among other companies. They perceived that livestock have suffered because of this phenomenon, reducing production by 80 per cent over the last few years (Indigenous representative 7 [Male, *ancianos*] 2012). For them, this situation has affected not only their economic activity but also traditional customs, as

grazing used to be developed on the riverbanks of the Salado River, a tributary of the Loa River, but now they have their animals in farmyards: “Now it is not as before when people used to have 50 or even 100 sheep and goats. All the customs were lost” (Indigenous representative 7 [Male, *ancianos*] 2012). Another example is ‘animal flowering,’ which consists of decorating animals with flowers of wool as a form of gratitude to the land, which has lost its traditional format due to the shortage of animals (Indigenous representative 7 [Male, *ancianos*] 2012).

For *ancianos* this loss of tradition is also due to the arrival of new technologies. Although *ancianos* agree that new technologies, such as the Internet, have advantages because they are good for youth development, they also has negative consequences as they weaken the communication with their parents and grandparents, as they do not know how to use these technologies (Indigenous leader 6 [Male, *ancianos*] 2012). Indeed, some members of this group believe that technology affects culture transmission, as the younger group has other codes that are not understood by middle-aged adults and much less by *ancianos*, generating divisions between the generations (Indigenous representative 5 [Female, *ancianos*] 2012). This is particularly complicated because there are families that live in the city and have less contact with their grandparents who remain in the village, generating even greater differences. For instance, *ancianos* show resignation when talking about how television consumes a large amount of the *younger generation’s* and *middle-aged adults’* time, changing their priorities: “Generations are not always the same. My sons have another generation and my grandsons are going to live in another generation. What can we do about it?” (Indigenous representative 5 [Female, *ancianos*] 2012).

To confront this situation, the message of the *ancianos* to both middle-aged adults and the younger generation is oriented toward promoting respect for the land. In this regard, *ancianos* invite other generations to continue developing activities related to the land, with the aim of reminding them that all the benefits they have lie in the goodness of their territory, and in their ancestors (Indigenous leader 10 [Male, *ancianos*] 2012). Indeed, this is especially relevant for older women as they have a special role in the transmission of cultural identity. Thus, the main message for the new generations is to give the land its rightful place: “The respect for the ‘*Pachamama*’ is the basic element for all of us. Because thanks to it we can be people, otherwise we will never be as we must be, with principles” (Indigenous representative 6 [Female, *ancianos*] 2012).

5.3.2 The lost generation

For middle-aged adults, what it means 'to be an Atacameño' is mainly based on their indigenous status as defined by the Indigenous Law. Unlike *ancianos* who relate this status to belonging to a territory, middle-aged adults do not have a specific discourse to define the main requirements for being an Atacameño. In this sense, for them it seems easier to go to their official designation as members through the 1993 Indigenous Law, rather than to explain in symbolic terms the meaning of being an Atacameño: "The Law recognises me (...) I was born and grew up here (...) My father was an Aymara but he revoked it (...) (and) he has been here [in Chiu-Chiu] for more than 50 years" (Indigenous leader 4 [Male, middle-aged adult] 2011). Also, they consider that living in the village is a very important factor to 'auto-denominate' an Atacameño, as you know how the system works and the rules of the community. Indeed, the arrival of the Aymara is not a big issue amongst middle-aged adults of the community, as long they Aymara participate and become involved with the community dynamics: "You are Atacameño because you have the surname, but that person has the same rights that you have. The Aymara have the same rights because (...) they participate in traditions of the village, and they pay the bills (...) For me that is equality" (Indigenous leader 4 [Male, middle-aged adult] 2011).

The process of transmission in this group appears to be less clear than the one that the *ancianos* (especially older women) promote. When analysing the dialogue of the middle-aged adults it is clear that they highlight the importance of developing initiatives to promote indigenous identity based on the tools that the Indigenous Law has given to them (Indigenous leader 8 [Male, middle-aged adult] 2012). However, members of this age group seem to have fewer symbolic elements to promote their identity and therefore essentially rest on the initiatives that CONADI and other State institutions promote in terms of cultural activities (Indigenous leader 8 [Male, middle-aged adult] 2012). For instance, this can be seen in other Atacameño communities located in the region, such as Toconao, where the transmission of communitarian heritage skipped the (middle-aged) adult generation: "So I believe that this revival of the ethnicity in the Atacameño community has generated collateral effects, it has approached young and old generations, which conserve these traditions" (Academic 2, 2012). Particularly in Chiu-Chiu the detachment that some middle-aged adults have shown from cultural activities has facilitated relations between the *ancianos* and the younger generation, with the difference being that the latter have

reinforced the inclusion of other ethnic groups such as the Aymara, following the middle-aged adults' lead.

So in this way, middle-aged adults in the community promote activities that include members of other ethnicities as opposed to demonstrating differences with them as happens with *ancianos*. One traditional activity in which some middle-aged adults of the community participate is the 'Tripartite Fair' where goods from different communities are bartered. This activity includes the participation of members of different ethnicities such as Atacameño, Aymara and Quechua from the countries of Argentina, Bolivia and Chile, and is mainly based in Hito Cajon, the boundary between Chile and Bolivia (Indigenous representative 8 [Male, middle-aged adult] 2012). Because of the altitude of the place where these communities meet (4,600 metres above sea level), the *younger generation* and the *middle-aged adults* are the ones who participate the most and there are only a few *ancianos* leading ceremonies, such as the payment to the land. Indeed, this activity shows how the *middle-aged adults* of the community consider that other ethnicities should be part of the preservation of the culture: "We have recovered part of our culture (...) We have recovered our culture in a higher level with the other communities" (Indigenous representative 8 [Male, middle-aged adult] 2012). Hence, many middle-aged adults consider that the Indigenous Law generates problems in the village of Chiu-Chiu. This is because it gives the possibility to be an Atacameño only if you have an ancestral link with that ethnicity, even if you were born in the village: "The Law should say that you can belong to this ethnicity if you are Atacameño, Aymara or a member of another indigenous community" (Indigenous leader 9 [Male, middle-aged adult] 2012). In this regard, members of this age group validate the role that other ethnic groups play in the village and are open to giving them a better position in the community.

For middle-aged adults, the Loa River is also considered to be the most important symbol of cultural transmission, although their interaction with it is different than other generations. This group has more technical information about the Loa River and the consequences that the community suffered with the 1981 Water Code application, but they do not have a traditional link to it. Rather, middle-aged adults understand the role that the river has as tool for development and economic growth, rather than as a part of their heritage itself (Indigenous leader 8 [Male, middle-aged adult] 2012). Although this group understands the weaknesses of the river, due to the overuse of its water resources, they continue to see its

value mainly in terms of economic profit. For instance, almost all middle-aged adults approve of the business contract the community has with Quadra Mining to explore groundwater in the community's territory (Indigenous leader 8 [Middle-aged adult] 2012).

This form of interaction with outsiders, linked to the use of natural resources, has generated a gap between the middle-aged adults and the other age groups. This can be seen in the low rate of community participation in the main tourist project, the 'Inca Coya Lagoon.'¹⁸ This project, which had the support of Codelco and other actors, sought to develop a tourist attraction managed by the Indigenous Community of Chiu-Chiu. This project failed because the leaders, most of them middle-aged adults, were unable to involve the overall community in the project and to give work opportunities to the younger generation. As an *anciano* stated: "It didn't work and a lot of millions were thrown away as the people who came to visit destroyed the whole place. It is money thrown away" (Indigenous leader 3 [Female, *ancianos*] 2011). Nowadays, the entire infrastructure has been abandoned (see Photo 5.7) and there are no more initiatives with sites in the village. To address this type of situation, *ancianos* are planning to directly transfer their knowledge and traditions to the younger generation to ensure that the heritage will endure in the community: "I have to be useful for the village (...) I want to teach the youth (...) It doesn't matter if they are not from my family. That is the idea" (Indigenous leader 6 [Male, *ancianos*] 2012).

Photo 5.7 Infrastructure of the Inca Coya Lagoon



¹⁸ This project considered the construction of a restaurant (as well as other infrastructure investments) around the Inca Coya Lagoon with the aim of developing a tourist centre.

Source: Author. November 2011.

This gap between the *middle-aged adults* and the other generations is increased by the use of new technologies. Although some *middle-aged adults* do not have broad knowledge about new technologies, they have started to promote community activities (such as Assembly meetings) via the Internet, and are encouraging the participation of young members of the community (Indigenous leader 8 [Male, middle-aged adult] 2012). However, this situation has generated some differences with the *ancianos*, as they do not normally use this type of technology. As was observed in the fieldwork, this situation has affected the participation of *ancianos* in community activities, as they are working daily in the fields and have no time or interest in using this new technology: “They spoil children with that (Internet), sometimes I can see that at home” (Indigenous representative 5 [Female, *ancianos*] 2012). For them the traditional way to transfer information within the community is ‘by word of mouth’. In addition, informal interviews also demonstrated that although *middle-aged adults* are using the ‘language’ of the *younger generation*, they have not been able to ensure their participation in communitarian initiatives, revealing a lack of interest by the youth in their type of leadership (Indigenous leader 11 [Male, younger generation] 2012).

5.3.3 Reviving tradition through art

The younger generation does not have a specific way of defining what it is ‘to be an Atacameño’. In general terms, when talking about the younger generation it is possible to see a wide variety of connotations and positions regarding traditions and the way they understand the concept of cultural transmission. However, young members of the community that live in the village of Chiu-Chiu follow the *ancianos*’ idea of tradition arguing that belonging to a particular territory is the requirement for being an Atacameño. Indeed, young members of the community demonstrated during the fieldwork that working the land also gives them additional attributes since they have the opportunity to be in touch with natural resources (Indigenous representative 1 [Male, younger generation] 2011). Others that are living in Calama or in other cities of the region base their traditions on a more technical way of understanding natural resources, following to some extent the official connotations embodied in the Indigenous Law and the ideas promoted by middle-aged adults (Indigenous leader 11 [Male, younger generation] 2012). Although this group has a

more sporadic relation with the village, as they visit only on weekends or holidays, they still have a special link with tradition similar to the young members who live in the village.

Despite the internal differences that this group may have regarding tradition, the *younger generation* agree on the importance of cultural activities and the role of art in community festivities. Therefore, it is very common to see young members of the community participating in dances and playing music at various cultural celebrations in the community (Indigenous leader 10 [Male, *ancianos*] 2012). These cultural celebrations show a religious syncretism between the Catholic Church and the Andean roots of the Atacameño culture, and constitute an instance of community unity in which the youth play a leading role. The celebration of the '*Patron de San Francisco*' (Saint Francis of Assisi) on 4 October and the 'Easter celebration' are two examples of activities where the youth presence gives vitality to their culture (Civil Society 9, 2012), as can be seen in Photo 5.8. Indeed, it also shows that young members of the community are eager to participate in community activities, but sometimes do not have adequate incentives to do so (Academic 2, 2012).

Photo 5.8. Youth participation in local activities



Source: Author. April 2012

When the younger generation participates in these activities it can be seen that they do not make distinctions between the Atacameño and Aymara. An example of this is the musical group, 'Pat Ta Hoiri' (*Pachamama* in the *Kunza* language) which is composed of a mixture of young people of both Atacameño and Aymara ethnicities. This group, which started in 1997 at the Primary School of Chiu-Chiu and was led by two of its teachers, was

developed with the aim of maintaining and spreading the traditions of the Andean culture. For this, their repertoire consists of original music from Atacameño villages such as '*trote*', '*taquirari*' and '*cueca nortina*'¹⁹ (Conjunto Folclórico Pat Ta Hoiri, 2008). This shows how the school of Chiu-Chiu has played an integrating role between the Atacameño and Aymara, empowering their indigenous character: "We have taught them to be proud of their origins, to feel identified with their ethnicity and with all the benefits they receive as a consequence of that. That they receive indigenous scholarships because of their condition" (Civil Society 9, 2012).

The IGDs show that the role of the Loa River for this age group is not a very important aspect in itself. As the *ancianos* of the community say, nowadays there are fewer activities that the community can do in the river than previously, due to water scarcity. This is particularly relevant for older women, as they argue that the younger generation has lost the special link with the river that other age groups used to have, as they have less chances to interact with the river: "We used to go to the river because there was a lot of water and we caught lots of trout (...) Formerly I used to see my grandmother grazing and fishing (...) Nowadays youth only go to swim as there are no trout anymore" (Indigenous representative 5 [Female, *ancianos*] 2012). Indeed, some *ancianos* in the community consider that the relationship that the younger generation have with the Loa River is not based on respect, arguing that they do not care about its cleaning and care. However, listening to the music that the young members of the community are producing, it is clear that the Loa River has symbolic meaning to them, demonstrating that it is a part of the transmission of the Atacameño culture (Indigenous representative 6 [Female, *ancianos*] 2012). This can be seen in the testimony of a young member of the community who fully connects with the river: "Of the (river) we live, of the water of the river, of that most people live here" (Indigenous representative 4 [Male, younger generation] 2012).

The identification with natural resources through cultural activities has generated a special link between some of the younger generation and *ancianos* of the community. In this sense, it is possible to see an strengthening link between these two groups, as young

¹⁹ *Taquirari* ('Takirari') is an Andean dance that comes from eastern Bolivia, while *Trote* ('Trot') is to a type of dance typical of northern Chile. The *Cueca Nortina* is a family of musical styles and associated dances from Argentina, Chile, Bolivia and Peru.

members of the community understand that the traditional knowledge of the *ancianos* is crucial for developing their art initiatives properly: “This initiative approached young generations with the older ones as they maintain their traditions. Thus, skips the generation that is totally modern” (Academic 2, 2012). This can set a precedent for sustainability of the Atacameño culture in the new generations, as has happened in other Atacameño communities such as the Atacameño Community of Toconao. In that case, the co-administration of the ‘Chaxa Park Lagoon’ between CONAF (Corporation of National Forestry) and the Atacameño Community of Toconao in 2002 resulted not only in the first Protective Area managed by an Atacameño community (Radio Toconao, 2013) but also in a partnership that promoted the participation of young members of the community with the aim of transferring their culture (Academic 2, 2012). Ultimately, the connections between these two generations (younger generation and *ancianos*) open up new opportunities for youth to get to know their culture and spread their identity.

Here, the use of new technology has also played a crucial role. Young members of the community (both men and women) use the Internet and other technologies to promote their cultural activities beyond the community at a national and international level. As was observed during fieldwork, the younger generation has shown the capacity to spread Atacameño culture with much more effectiveness, even though many of them are not dedicated to agriculture. For instance, the music group ‘Pat Ta Hoiri’ has been invited to several festivals in Chile and elsewhere in Latin America, demonstrating that this group has crossed borders (Conjunto Folcklorico Pat Ta Hoiri, 2008). Indeed, this group has a Facebook page (www.facebook.com/patta.hoiri) and also has some videos on YouTube where they promote their music, with support from the Municipality of Calama and Codelco (<http://www.youtube.com/watch?v=m2UU1jQaanc>). To sum up, this music group constitutes a successful example of the way young members of the community have started to identify art as a space that embodies the roots of territory that the *ancianos* have passed on to them.

5.4 SUMMARY

The aim of this chapter was to assess in what ways intergenerational dynamics shape how an indigenous community articulates its collective vision of development, including a sense of territoriality. Specifically, it analysed to what extent IGDs shape the key elements that

constitute the Indigenous Community of Chiu-Chiu's definitions of local development and different positions regarding territory (section 5.1), as well as how these concepts are articulated in defining the community's economic priorities (section 5.2). This chapter also assessed how such dynamics reflect age-related traditional interests and cultural senses of identity and territoriality (section 5.3).

CHAPTER 6. INTERGENERATIONAL DYNAMICS AND ‘EXTERNAL’ POLITICAL NEGOTIATIONS

Muchos hermanos míos se han ido a la ciudad, hoy estaban trabajando con sus hijos, lejos de aquí. Todos aquellos que se fueron algún día vuelven al pueblo Para el Santo Patrono, para los carnavales, para la limpia de canales.

(Many of my brothers have gone to the city, today are working with their children, far from here. All those who left return someday to the village for the Patron Saint, for the carnivals, and for the channel cleaning)

Nostalgias Lickantantay, Pat Ta Hoiri Musical Group. Chiu-Chiu, Chile

The aim of this chapter is to explore to what extent and in what ways Intergenerational Dynamics (IGDs) impact political negotiations with external actors (notably, large mining firms and State agencies). It analyses to what extent IGDs are reflected in who has the ‘right’ to sit at the negotiating table and how community demands/aspirations are actually articulated towards outsiders (section 6.1). This chapter also looks at whether IGDs contribute to community coherence when faced with outside interventions/threats or if it is a source of collective fragmentation (section 6.2). Finally it analyses to what extent external actors take advantage of any internal community schisms linked to IGDs and with what effects (section 6.3).

6.1 TYPES OF NEGOTIATION AND ARTICULATION OF DEMANDS

Negotiations with external actors are common practice and indeed necessary within indigenous communities in northern Chile. This is mainly because the majority of these communities are located in regions that play host to numerous mining operations developed by both TNCs (transnational corporations) and State corporations, such as Codelco. In this regard, considering the socio-environmental impact that this activity has on these communities, mainly regarding water scarcity and air pollution, it is easy to identify several key initiatives. There are several initiatives within Corporate Social Responsibility (CSR) programs that suggest how corporations may seek to mitigate and compensate for socio-environmental impacts on local communities. This trend, which started in the 1990s, instilled in TNCs the need for teams specialised in community issues and the importance of engagement plans to build better relationships and avoid problems with their diverse stakeholders (International Council on Mining and Metals, 2012).

Thus, the way in which indigenous communities interact with external actors is relevant to this research, as it shows another facet of the interaction between local and global forms of development. Considering that large corporations follow international agreements and standards, such as the IFC (International Finance Corporation), the ICMM (International Council on Mining and Metals), and the GRI (Global Report Initiative), it can be seen that they respond to global guidelines that orient the way local interventions should be developed through specific 'engagement plan' toolkits. Although most of them argue that understanding the local context is crucial for the success of these initiatives (Large Corporation 1, 2012), it can be argued that these initiatives at international and national levels are sometimes detached from local reality, and are more specifically oriented to responding to the desires of different stakeholders based elsewhere in the world.

Although several mining companies surround the village of Chiu-Chiu, as can be seen in Figure 6.1, this section mainly analyses the negotiation methods that this community uses with Codelco, and especially with regard to their Chuquicamata mine,²⁰ due to the water conflict (see Chapter 4). However, the section briefly considers the relationship of these communities with 'Sociedad Contractual Minera El Abra' (El Abra) and with 'Compañía Minera Doña Inés de Collahuasi' (Collahuasi). El Abra is located in the Region of Antofagasta and belongs 51 per cent to Freeport-McMoRan Cooper & Gold, and 49 per cent to Codelco, while Collahuasi is located in the Region of Tarapacá and belongs to Xstrata Cooper and Anglo American, with 44 per cent control each, and 12 per cent of a Japanese consortium led by Mitsui & Co Ltd.²¹

²⁰ Chuquicamata is owned by Codelco and is the world's largest open cast copper mine. It is located in the Loa Province in the Atacama Desert (Codelco 2011).

²¹ The latter is included because it had a significant presence in the area during my fieldwork (November 2011-June 2012). They presented a project that contemplated the extraction of 500 litres of water per second from the Loa River that previously belonged to '*Aguas Antofagasta*' and was designated for domestic use. The SEA (Environmental Assessment Service) rejected this project on 2 February 2012 because of a lack of information regarding sectorial permits, impacts and mitigation measures (www.seia.sea.gob.cl).

Map of the Atacama Region, Chile

Legend:

- Camino Pavimentado (Paved Road): Solid red line
- Camino de Grava (Gravel Road): Dashed red line
- Ferrocarril (Railway): Black line with cross-ticks
- Minas de Cobre (Copper Mines): Red circle with a cross
- Minas de Oro y Plata (Gold and Silver Mines): Yellow circle with a cross
- Minas de otros minerales (Other Mineral Mines): Blue circle with a cross

Geographical Features:

- Rivers:** Rio Loa, Rio Salado, Rio Maipo, Rio Copiapo, Rio Chuquibambilla, Rio San Pedro.
- Salt Flats:** Salar de Mar Muerto, Salar de Atacama, Salar de Punta Negra, Salar de San Pedro, Salar de El Tatio, Salar de Los Hornos, Salar de Los Hornos, Salar de Los Hornos.
- Mountains:** Cerro Dominador, Cerro San Cristobal, Cerro El Peñon, Cerro El Tatio, Cerro El Tatio, Cerro El Tatio.

Major Cities and Towns: Antofagasta, Copiapo, Calama, San Pedro de Atacama, Taltal, Potosi, Chuquibambilla, El Tatio, El Tatio, El Tatio.

Considering the large-scale presence of mining companies in the area, external political negotiations developed by local communities are a difficult task mainly due to the constant pressure on natural resources particularly water. Indeed, to understand the way that the Indigenous Community of Chiu-Chiu frames its demands towards outsiders it is crucial to identify not only the costs and benefits of external ‘intervention,’ but also the implications for the promotion of local development generally. A focus on IGDs here helps to define how the historical processes in Chile over the last 50 years have affected the way local

groups are organised and how they interact with external actors (NGO representative 2, 2012). Building on Chapter 5, it allows an analysis of how different ways of understanding local development have conditioned the way that different age groups elaborate external political negotiations, as well as the pros and cons of this situation, according to the age-group categories set out in the last chapter.

6.1.1 Community leaders should represent the Assembly's will

Ancianos fully understand that given the scenario facing the village of Chiu-Chiu today, negotiations with outsiders are crucial to their welfare. However, they are highly critical when talking about the effects that mining companies have had on agriculture, notably in terms of water and air pollution. They go on to assert that the benefits that mining companies can provide members of the community are never comparable to the difficulties that the village has experienced over recent years due to mining. Indeed, they immediately start to remember how their grandparents never depended on mining projects, setting a precedent that they have never needed help from mining: "Our grandfathers never lived from projects, never lived from mining, but from a sustainable economy, an autonomous economy (...) they lived in harmony with the environment without altering what was around" (Indigenous leader 6 [Male, *ancianos*] 2012).

Following this line of argument, some *ancianos* believe that mining companies should, therefore, compensate them for all the damage that they have caused, especially Codelco, as this firm is seen as the most contaminating company in the area: "For me Codelco must compensate and pay for all the damage that they cause every day, with air that is polluted from the (tailing dam) Talabre (...) it is placed in the carrot greens causing them to dry out" (Indigenous leader 3 [Female, *ancianos*] 2011). Indeed, this age group takes an 'extreme' position on this topic. Large impacts must be accompanied by with large mitigation measures: "I don't exchange anything, any natural resource, anything. I am willing to be paid (by Codelco) for damage and prejudice, but I am not negotiating with Codelco, with any company, I am demanding payment for damages" (Indigenous leader 6 [Male, *ancianos*] 2012). At the same time, they recognise that there is nothing that Codelco can do to reverse all the damage that it has caused over the last 50 years, as the village has become more vulnerable and helpless, with its water scarcity reaching unprecedented levels.

Although some members of this age group express their indignation with the way that Codelco has affected their welfare and quality of life, others also understand that the initiatives that this company (as well as others) are pursuing benefit others, especially the younger generation: “Since they are taking the water, killing the people, (they) should give work to the people, to the young. From 35 years old and under” (Indigenous representative 7 [Male, *ancianos*] 2012). In this regard, they are resigned to the fact that the consequences of water scarcity for the village have not changed and are getting worse with the passing of the years. Therefore, they agree that these problems affect all ages and that the *younger generation* does not have any choice but to fight for new opportunities (Indigenous representative 7 [Male, *ancianos*] 2012). Following this argument, this age group demands that their leaders adopt guidance based on the community’s will, developing long-term initiatives instead of accepting palliative plans that the mining companies have developed to ‘clean up their image’. In short, *ancianos* regretfully insist that middle-aged adult leaders should develop networks and working groups with other actors such as State authorities and mining companies to *guarantee* opportunities for the younger members of the community.

The way that this age group understands leadership differs from the views of the other age groups. For them, the leaders of the community should be *ancianos*, as they have more experience and they should follow the Assembly’s will, as it constitutes a place where members of the community are allowed to participate and exchange ideas. Indeed, the main elements to be discussed with ‘outsiders’ should emerge from Assembly meetings, as it is the voice of the community (Indigenous leader 6 [Male, *ancianos*] 2012). However, some women in this group believe that their differences with the current leaders have affected their participation: “It has been three years since I’ve gone to the meetings (...) they are not going to understand me (...) if I talk maybe they are going to say that I am insane...therefore I prefer not to go” (Indigenous representative 5 [Female, *ancianos*] 2012).

In addition, the role that other actors have in such regional negotiations is very weak, as *ancianos* are very critical of the inclusion of both academics and NGOs (non-governmental organisations). Academics have not shown any particular interest in Chiu-Chiu. Although there is a significant number of anthropologists and archaeologists working in the region,

they are mainly focused on San Pedro de Atacama and have not been able to push public policies that confront water scarcity and hence promote what *ancianos* would consider as positive changes in the area: “As social scientists we haven’t gained a space and respect within other disciplines that are more specialised in natural resources” (Academic 1, 2012). In fact, some scholars agree that they are not seen by the older leaders of the community as a group that supports their claims (Academic 1, 2012). NGOs have also lost their leadership position at both regional and local levels, as they do not represent local claims: “NGOs belong to a small bourgeoisie that doesn’t represent indigenous communities’ reality” (NGO representative 2, 2012). In addition, NGOs that have played an important role building capacity in local communities in the past, nowadays are struggling for funds due to a lack of financial support from State authorities and international organisations: “Although they have a strong ideological position they don’t have funding (...) and as you have to go to the community with your own funds, it is a problem that affects all of them” (NGO representative 1, 2012). This situation has weakened the role of NGOs at local levels by centralising their operations in urban centres, generating further differences with *ancianos*, as they are detached from the reality that this group share with their territory: “I saw (in the group of experts) a business issue, I didn’t see a commitment to the indigenous community” (Indigenous leader 6 [Male, *ancianos*] 2012).

Therefore, members of this age group believe that local cohesion has changed over the last few years. As a result of neoliberal initiatives, they think that the leadership in local communities has become more individualistic as each one wants to obtain discrete benefits from external actors, especially Codelco. Indeed, an older member of the community insists that they have started to prefer individual benefits rather than collective initiatives, as leaders (mainly middle-aged adults) are not yet representing the needs of the community per se: “They (International Council on Mining and Metals) should pay us a salary every month but not give money to the community because they have invested in silly things that have had bad results” (Indigenous leader 3 [Female, *ancianos*] 2011).²² In addition, they condemn links that some middle-aged adults have had with Codelco and other companies such as Collahuasi as they are focused mainly on obtaining money for unsuccessful projects instead of real benefits for the community, in terms of water access,

²² Some of the ‘silly’ things in which the community have invested are the infrastructure for the Inca Coya Lagoon and the museum. Neither project was functioning when the fieldwork was carried out, between November 2011 and May 2012.

education and labour opportunities, among others (Indigenous representative 5 [Female, *ancianos*] 2012).

6.1.2 The important role of the leaders

During the last few years in particular the middle-aged adults have played a crucial role in external negotiations. This situation has to do with the fact that members of this age group have been in power since 2009 leading all the negotiations with government departments, municipal authorities, large corporations and NGOs. They control the organisation the Indigenous Community of Chiu-Chiu, which is the strongest body in the village, even more than the Neighbourhood Council which, although older, it was established in 1971 (see Photo 6.1), has seen its functions curtailed over time to just social and educational initiatives: “The Neighbourhood Council covers topics of education, health and social problems (...) the Community deals with topics of territory, water, and especially environmental and heritage issues. So there are two institutions (...) I believe that the Community rules” (Indigenous leader 6 [Male, *ancianos*] 2012). In this sense, the role of the Neighbourhood Council has long been focused on ‘secondary’ issues, while conversely prominence has been given to the Indigenous Community of Chiu-Chiu because it is the organisation in charge of the two main issues in the village: water and land.

Photo 6.1. Neighbourhood Council official sign, Chiu-Chiu



Note: Headquarters of the Neighbourhood Council of Chiu-Chiu. Founded in 1971. Land acquired by a group of community residents.

Source: Author. November 2011

This age group seeks all possible benefits from outsiders and all opportunities that the market and their indigenous status can give to them. Such opportunism is reflected in daily practice, as a middle-aged adult leader states: “I have good relations with people from the government lawyers, and even with you because the relation is different, I try to talk as equals before fighting” (Indigenous leader 8 [Male, middle-aged adult] 2012). This openness that middle-aged adults have promoted can also be seen in the way that this age group has carried out massive recruitment of Atacameños living outside the village (especially in Calama), offering them benefits for moving to Chiu-Chiu such as land for housing and scholarships, thereby encouraging community growth. This has resulted in a decrease in representation in other age groups (particularly the *ancianos*) and even members of the same age group, as the Community has almost doubled its members without officially consulting the Assembly. This can be seen in the testimony of a Community middle-aged adult: “Before this last period we were 280 members. Since then (the new period) until today, we are 580 members. It means we have doubled the number of members. The reason? The benefits that they (i.e. local authorities) were giving: land, scholarships” (Indigenous leader 9 [Male, middle-aged adult] 2012).

The main reason why this age group is more open to promoting negotiations with outsiders lies in the fact that it is time, in their view, for the indigenous communities to ‘legally control’ their own situation. Therefore, they rely on all the benefits that the Indigenous Law gives and believe that by using the support of CONADI (National Corporation for Indigenous Development) they are able to avoid internal divisions: “One of the good things that the Government did and that changed the community was the creation of the Indigenous Law (...) which gave leadership to indigenous [people], because we never had a Municipality that really represented our issues” (Indigenous leader 8 [Male, middle-aged adult] 2012). Following this argument, this age group started to promote a way of decision-making that did not consider the role of the Assembly. The leaders started to make decisions on communitarian investments and projects without having representation in the Assembly and the accountability processes lost formality (Indigenous leader 9 [Male, middle-aged adult] 2012). In this respect they differ from *ancianos*, as they believe that the Assembly is the place to let the community know what the leaders are doing and not the other way around. Their position states that this age group is better prepared to face the pressure from outsiders than *ancianos* or the younger generation.

Middle-aged adults reflect a sense of self-confidence notably lacking among *ancianos*. Thus this age group think that they have enough skills and tools to face the diverse situations that are affecting them, without the need for outside help, such as from NGOs. For them, the role of CONADI is crucial and they do not really expect to have more support than this (Indigenous leader 8 [Male, middle-aged adult] 2012). NGO representatives agree with this age group, as they have seen how indigenous communities have started to avoid ties with them because they feel themselves to be misrepresented. In fact, NGO employees see the point: “indigenous communities (especially Mapuche) have developed a degree of maturity that allows them to negotiate with outsiders without needing technical advice from NGOs” (NGO representative 1, 2012). Indeed, through scholarships given by the Chilean government and with the arrival of the Internet, indigenous communities have started to acquire new skills and therefore, a new status (NGO representative 1, 2012). However, it can be seen how this phenomenon has not developed as fast in Chiu-Chiu as it did with the Mapuche, basically because the former still has less political power than the latter. In fact, young members of the community are critical of the way that the middle-aged adults have negotiated with other actors, believing they have shown a lack of expertise in areas such as project management that are vital to successful negotiating practices (Indigenous leader 11 [Male, younger generation] 2012).

Despite the purported slowness they have shown in project management and accountability, leaders of the middle-aged group have nonetheless been pioneers in the development of a new set of contracts. Thus, for example, they broke the bond that the community used to have with the Council of Atacameño People²³ arguing that they did not represent the spirit of Chiu-Chiu anymore (Indigenous leader 8 [Male, middle-aged adult] 2012). They changed their political networks in this way to give priority to technical initiatives, as the benefits were self-evident in their view. In this sense, the role of INDAP (Institute of Agricultural Development) is well regarded by this age group, as it gives support to small farmers in reviving degraded soil and the purchase of fertilizers and seeds: “INDAP gives us support for the recovery of degraded soils (...) you have to apply for credit with a very low interest rate” (Indigenous leader 1 [Male, middle-aged adult] 2011). However, this position does not represent the views of other generations who often feel that INDAP is not an agent of development, but rather an institution that acts purely as

²³ As mentioned in Chapter 4, one the most important Atacameño associations within San Pedro de Atacama and Calama is the Council of Atacameño People, which has historically been led by members of communities located in the Municipality of San Pedro de Atacama.

a money lenders. For instance, the younger generation argues that they prefer not to ask for these loans, as they do not have the money to repay them: “I’m not into projects. Like I said you have to pay them, but I don’t have [a chance] (...) to recover that money (Indigenous representative 1 [Male, younger generation] 2011).

Not surprisingly, middle-aged adults do not have major criticisms of the way negotiations are being developed within the community since they represent the majority of the current leaders. Indeed, one leader argues that his role is essentially the improvement of the community, showing a lack of self-criticism: “[for] my generation (...) I am strategic, I am a key actor, sorry...but I know all, all, all, I know about water, territory, archaeology, about the demands” (Indigenous leader 8 [Male, middle-aged adults] 2012). This age group believes that the community’s problems are based notably on the lack of participation by others, especially the younger generation, rather than problems of their leadership. Indeed, they insist that it is important to promote new ways and mechanisms of participation such as online spaces, rather than to change the method of leadership as some other age groups have suggested.

6.1.3 More ideas, less participation

In contrast, external negotiation is not an activity commonly practiced by young members of the community. Although they are conscious of the difficulties that the village is facing, notably regarding environmental impacts and water scarcity, they are not a group that actively participates in the Assemblies, mainly because they have different priorities (Indigenous representative 1 [Male, younger generation] 2011). In general terms, they are less participative because they are concerned about other activities that affect them, such as cultural activities (Indigenous leader 4 [Male, younger generation] 2012). It is also because there is tension between the *ancianos* and middle-aged adults when dealing with community issues, which affects in turn how this age group sees its role in community activities (Indigenous representative 9 [Female, younger generation], 2012). While the *ancianos* focus all their energy on promoting initiatives to recover water rights and restore agriculture, which to them correspond to the village’s heritage (Indigenous leader 6 [Male, *ancianos*], 2012), the middle-aged adults focus their efforts on obtaining new opportunities from mining companies and other activities such as tourism, thereby promoting growth and development (Indigenous leader 8 [Male, middle-aged adult] 2012).

The younger generation tend often to be critical about the role that both middle-aged adults and *ancianos* have had in external negotiations (Indigenous leader 11 [Male, younger generation] 2012). Although *ancianos* have more connection to the water issue via agriculture, this age group identifies in them a lack of technical knowhow that weakens their argument against the mining companies: “I have another way of seeing things (...) My grandfather sees it in another way but things are changing (...) you cannot live only from agriculture” (Indigenous representative 4 [Male, younger generation] 2012). However, the younger generation are also critical of the way that the middle-aged adults promote communitarian claims, arguing that they are more concerned with obtaining short-term projects and/or funds rather than searching for long-term solutions to respond to the water scarcity that is affecting agriculture and therefore the welfare of the village: “The community is still irrigating with less water than before and they haven’t given weight to what could really happen (...) regarding water” (Indigenous leader 11 [Male, younger generation] 2012).

In this sense, the younger generation’s vision on negotiations with outsiders appears to be a synthesis of both the *ancianos*’ and middle-aged adults’ ideas. However, as was seen during fieldwork, the internal differences that are affecting Chiu-Chiu’s leadership are affecting the less participative youth. Indeed, it has divided the community in terms of social relations, as a young member of the community argues: “I don’t go out too much. I say hi, I know them, I joke with them. But not to have a friendship relation” (Indigenous representative 1 [Male, younger generation] 2011). In this context, they believe that the community should rethink their negotiations with external actors in terms of the real opportunities that they have to improve their development and welfare. Indeed, they are not asking for money, which is more common in other age groups (especially middle-aged adults), but for opportunities to expand their possibilities: “Several of the young are looking for labour sources out of the village (...) (Now we) have another vision, of the future (...) (we are) young with technical and university degrees” (Indigenous representative 4 [Male, younger generation] 2012). In addition, they also demonstrate a special interest in water as *ancianos* do, but not through participation in community Assemblies. In contrast, they face community problems in a more radical way, promoting marches and takeovers against the lack of opportunities that the community is receiving (Indigenous representative 9 [Female, younger generation] 2012).

Therefore, the negotiation methods that can be identified in this age group are still weak in terms of representativeness. This age group shows one of the symptoms of the return to democracy, where the social dynamics of cohesion have redefined the local ways of organisation from a 'territorial' perspective to a 'functional' perspective based on specific demands such as housing (NGO representative 2, 2012). Indeed, this trend has not only generated internal conflicts between *ancianos* and middle-aged adults, but has also affected the younger generation as they have started to search for new areas of social cohesion. In this sense, the school at Chiu-Chiu has played a very important role over the last 15 years. A group of young members of the community who are currently between 18 and 27 years old were part of the music group 'Pat Ta Hori', that was nurtured in the school, promoting their identity and the importance of belonging to an ethnic group (Conjunto Folcklorico Pat Ta Hoiri, 2008). In this way, this educational establishment gave them the opportunity to define new spaces of internal cohesion besides the Indigenous Community of Chiu-Chiu. As a young woman said during the fieldwork, there are three music groups in Chiu-Chiu whose members are not in the village, but which still have claims on territorial development as they are aware of the community issues (Indigenous representative 9 [Female, younger generation] 2012).

Hence, the exclusion that this group feels from the traditional forms of participation has affected their capacity to place their issues on the agenda and therefore to collaborate actively in external negotiations. In other words, this group differs from both the *ancianos* – as they do not support their narrowly conceived ideas of development and their lack of openness to negotiate – and with middle-aged adults – as they do not transmit their ideas to the community while being blinded by economic profit. For instance, water appears to be at the centre of a rift between the younger generation and other age groups' ideas as they have shown an apparent lack of deliberation regarding how to affirm their water claims: "the Community of Chiu-Chiu does not reflect on their water rights. The Community doesn't know how many water rights they have" (Indigenous leader 11 [Male, younger generation] 2012). Indeed, one young leader of the community is insistent on this point stating that the *Junta de Vigilancia*²⁴ has not been well analysed by community leaders,

²⁴ *Juntas de Vigilancia* are supervisory committees in charge of monitoring the use of 'natural' sources of water such as rivers. Currently, Chiu-Chiu as well as the communities of Calama, Lasana and Quillagua, is against the establishment of a *Junta de Vigilancia* for the Loa River, as large companies will have control of the water and its distribution if such a group is created.

and the consequences that it could generate in both the allocation and the regulation of water rights will be irreparable: “The community has not taken the real weight of the creation of the *Junta de Vigilancia*” (Indigenous leader 11 [Male, younger generation] 2012).

6.2 COMMUNITY COHERENCE AND COLLECTIVE FRAGMENTATION

Indigenous communities are located all around the II Region of Antofagasta and were formally constituted and recognised under the Indigenous Law of 1993. At the same time, these communities are surrounded by mining companies that are demanding larger quantities of water: “The State declared this area as a mining district in the 80s and we lost all the possibilities that we had regarding water claims” (Indigenous representative 8 [Male, middle-aged adult] 2012). Since then, and even before, these communities have had a difficult relationship with the mining companies and suffered various serious environmental impacts. Although these communities began with a similar position regarding natural resources and community initiatives, external processes have affected how these groups have subsequently organised.

Within the 25 indigenous communities located in the II Region, Chiu-Chiu was formally constituted as an Atacameño community in 1995 (Ayala, 2009). Since then this Community, as well as others within the region, has been targeted by external actors. Processes of unequal power relations with the large corporations, lack of other possibilities generated by the municipal and state authorities, migration to/from other regions, and environmental problems such as water and air pollution have become everyday issues here (Indigenous leader 6 [Male, *ancianos*] 2012; Indigenous leader 8 [Male, middle-aged adult] 2012). However, water scarcity due to the 1981 Water Code appears to be the most important element of this research projects because it has exacerbated the various problems mentioned above, constituting a scenario that allows these IGDs dynamics to unfold, while creating internal conflicts and generating collective fragmentation.

Although there are several issues currently generating internal problems within the community, this section will focus on three elements that have severely affected these processes under the aforementioned Water Code. For this, IGDs will be analysed with the aim of understanding how the different age groups have faced the internal issues

generated through external negotiations. The three elements are: (1) The allocation of water rights after the application of the Water Code in 1984 and how the community has struggled to promote community rights instead of individual rights in order to preserve their territory; (2) access for Aymara members to water rights and the consequences of such in terms of identity and cultural heritage; and (3) urban and rural dynamics regarding the possibility of becoming like Calama or San Pedro de Atacama, cities primarily dedicated to mining and secondly to tourism, rather than to agriculture.

6.2.1 Water rights and the role of CONADI

As noted, the application of the Water Code has had important and multifaceted consequences in Chiu-Chiu. Since its application in 1984 the relationship with the territory, and therefore with the water and land has changed. The fact that this Code separated water rights from land ownership resulted in a number of consequences in terms of community dynamics, redefining their organisation and productive activities (Cuadra, 2000). Through the DOH (Directorate of Hydraulic Works), the Chilean Government instilled fear in indigenous residents forcing them to register only the water that they were using for agriculture, threatening them with specific taxes, and not allowing the registration of all of their water rights (Indigenous leader 1 [Male, middle-aged adult] 2011). This situation not only generated a water deficit, because the community soon started to have more agrarian land than water available to service it, but also internal divisions as the indigenous organisation itself changed. Nowadays some members of the community have both individual and collective water rights, while others have the latter due to efforts made by CONADI since its constitution in 1993 (Cuadra, 2000).

In keeping with the Indigenous Law, CONADI has three funds that have provided support to indigenous communities: The Fund of Land and Water, the Fund of Indigenous Development, and the Fund of Education and Culture (Regional Authority 1, 2012). The first fund is the one that has been oriented towards recovering water rights that the Indigenous Community of Chiu-Chiu, as well as other communities, lost with the application of the Water Code. The idea of this fund is mainly based on the creation of several instruments to satisfy demands that the indigenous groups have regarding land and water, considered to be vital elements in the promotion of development policies within the Corporation (CONADI, 2011). In practice, the role of CONADI has been oriented to

buying water rights from members of the community that still hold individual rights and that do not want to continue sowing, preventing these rights from being purchased by mining companies and transferring individual rights to community rights (Indigenous leader 1 [Male, middle-aged adult] 2011). However, with the constitution of Chiu-Chiu as an indigenous community in 1995, CONADI offered to transfer all the community's individual rights to communitarian rights, but not all of the residents accepted this, basically because the members that had individual rights thought that it was unfair to them (Indigenous leader 2 [Female, middle-aged adult] 2011).

Despite the efforts that CONADI has made, the application of the Water Code has resulted in collective fragmentation affecting communitarian dynamics. From the IGDs prism it can be argued that *ancianos* do not see such fragmentation, while *middle-aged adults* and young members of the community have tried to better understand this situation. In general terms, some *ancianos* are critical of the role of CONADI, especially the office located in Calama that is responsible for the community of Chiu-Chiu: "They focus on San Pedro de Atacama, in the I Region (of Tarapaca), and leave Chiu-Chiu to be eaten by fish" (Indigenous representative 5 [Female, *ancianos*] 2012). Although the director of the Calama office was born in Chiu-Chiu, members of this group insist that this institution has not addressed the increasing demands they have placed on the agenda regarding water. Indeed, some *ancianos* take a harder stance arguing that CONADI is only a political organisation that does not really care about the situation of the communities: "I have come to believe that for CONADI it is not convenient to have leaders more prepared, but to have leaders without education, that are quiet, and that have problems with something so they can give them small projects (...) Even they look for leaders [with that characteristics]" (Indigenous leader 6 [Male, *ancianos*] 2012).

The middle-aged adults' position regarding this situation is substantially different. As with the other groups, middle-aged adults have done a diagnosis of the current plight of the community: "We used to have a water deficit of almost 120 acres" (Indigenous leader 1 [Male, middle-aged adult] 2011). However they have not focused their initiatives on recovering water rights for the community, instead prioritising activities of easier access, to a certain extent thereby ceding the responsibility for water and land to CONADI. Not surprisingly, members of this group have a very good relationship with this agency as they consider it vital for their development (Indigenous leader 8 [Male, middle-aged adult] 2012)

in contrast to the position that some *ancianos* have towards it, who refer to it as an “indigenous dictatorship” (Indigenous leader 6 [Male, *ancianos*] 2012). In general terms, the leadership that middle-aged adults have promoted is not based on water resources (unlike *ancianos*) but mainly on a set of wider-ranging community based projects, productive businesses and labour/work opportunities as mentioned in section 6.1. However, this leadership has thereby weakened communitarian social cohesion because there is no longer a common issue under which claims are drawn together, engendering collective fragmentation.

This process was seen during the fieldwork with the changes that middle-aged adults have been involved with concerning individual water rights registered under the 1981 Water Code (see Chapter 4). In this regard, some middle-aged adults who had inherited individual rights were analysing the possibility of using them to negotiate more effectively with external actors and regulators: “If they install meters (...) we are going to have conflicts among us (...) because there are many people that do not have any [legal] water” (Indigenous leader 2 [Female, middle-aged adult] 2011). Indeed, there are members of this group trying to avoid depending on the Indigenous Community of Chiu-Chiu who have started to enter into dialogue with the State authorities such as the DOH with the aim of registering individual water rights within the three water communities that the Water Code defined with its application in 1984: ‘Grande’, ‘El Pueblo’ and ‘La Banda’. Although this will inevitably exclude members of the community that do not have individual water rights generating a social (class) division (similar to land access), they believe that the Indigenous Community of Chiu-Chiu has failed in terms of recovering water rights for agriculture and has been very permissive about delivering community water rights to people who are not working in agriculture (Indigenous leader 2 [Female, middle-aged adult] 2011).

Community divisions are clear here. Some middle-aged adults believe that the Indigenous Community of Chiu-Chiu should be the organisation that distributes water rights within the community as well as other benefits (Indigenous leader 8 [Male, middle-aged adult] 2012), however both *ancianos* and the younger generation agree that this is not a priority for them (Indigenous leader 11 [Male, younger generation] 2012). Others believe that the

*Comunidades de Agua*²⁵ could allow a more efficient administration of water resources (Indigenous leader 2 [Female, middle-aged adult] 2011). With regard to this situation, young members of the community are clear when they say that having a mixture of individual and communitarian rights has not only affected the agricultural future (alluding discourse with *ancianos*), but has also generated irreparable divisions: “Before, we all lived in community. There were less people but they loved each other. Now all of them have bad relationships” (Indigenous representative 1 [Male, younger generation] 2011). Indeed, although members of this age group recognise that both middle-aged adults and *ancianos* have higher experience regarding water management, some of them are critical of the management developed so far. They consider that establishing a system in which water rights are distributed individually, as some middle-aged adults have proposed, could be negative for the communitarian vision of natural resources and implies a tacit acceptance of the current Water Code (Indigenous leader 11 [Male, younger generation] 2012). In addition, they also believe that *ancianos* are simplistic about the challenges the community is facing regarding the water, showing a lack of technical knowledge in both the allocation and management of the water. Indeed, they think that *ancianos* have not addressed the challenges that the community will continue to face as they keep using as much water as they need, without regulating the situation (Indigenous leader 11 [Male, younger generation] 2012).

Thus, although application of the Water Code modified the organisation and distribution of water rights in the community, the administration of this resource still has communitarian roots, mainly due to the role of CONADI. However, the fact that *middle-aged adults* who have individual water rights are getting upset about sharing water with people that only have communitarian water rights in a context of water scarcity, contrasts sharply with the *ancianos*’ arguments about water and territory, therefore generating internal differences.

6.2.2 Us and them: The role of the Aymara in the community

How the Aymara relate to the pre-existing Chiu-Chiu community is a second area where the role of IGDs in the fragmentation of a collective Atacameño identity can be seen. The Aymara are also, after all, an ethnic group recognised by the 1993 Indigenous Law. This ethnic group was historically located in the I Region of Tarapaca, but began a process of

²⁵ *Comunidades de Agua* are local ‘water’ communities responsible for secondary infrastructure, such as distribution channels” (see Chapter 4).

migration in the second half of the 20th century due to the rupture of the nitrate cycle in Iquique and the beginning of motorised transport affecting labour opportunities there (Gundermann and González, 2008). As a result, the Aymara moved en masse to urban centres but also to nearby rural areas (Gundermann and González, 2008). This latter group can be seen in Chiu-Chiu, where a number of Aymara representatives have migrated to the village over the last 50 years: “They left their lands because of water scarcity. They came to the village. They bought land and some of them had water and some of them didn’t have any” (Indigenous leader 2 [Female, middle-aged adult] 2011). Since then, this ethnic group has lived in the ADI (Indigenous Development Area) of ‘Alto el Loa’, designated under Article 13 of Law 19,253 and mainly made up of Atacameños (Ministry of Planning and Cooperation, 1993).

According to the Census of 2012 the Aymara population constituted 8.65 per cent of the indigenous population in Loa Province (National Institute of Statistics, 2012).²⁶ Compared with the previous Census (2002), where it was only 0.94 per cent, this apparently shows a significant increase, reaffirming the migration trend over the last decade (National Institute of Statistics, 2002). This situation is especially relevant in Calama where the presence of Aymara has increased even more, reaching nearly 11 per cent of the total local population. This situation has been more notable still in Chiu-Chiu as it has become the perfect place for migration, providing for (some) agricultural activities in a location just 30 km from Calama. This migration is illustrated in the testimony of a representative of the School of Chiu-Chiu: “Now we have more Aymara kids than Atacameño (...) They have come from the north (...) from rural sectors of Iquique, Arica (...) They saw good economic resources” (Civil Society 9, 2012).

The Aymara presence has generated much debate with IGDs much in evidence among the Atacameños. In general terms most members of the Indigenous Community of Chiu-Chiu believe that the Aymara have brought vitality to the village: “It’s good, they arrived to work the land (...) they are part of the land and they have given a bit of life to the village, that is true, I have to admit it” (Indigenous leader 6 [Male, *ancianos*] 2012). However, there are perceived problems too. On the one hand, the Aymara have started to be seen as

²⁶ The Chilean government has been advised to annul the latest census, taken in 2012, because it failed to account for nearly 10 per cent of the population. However, it is still under revision by external advisors. For the purposes of this research, this information will only be used as a very approximate reference to show the increase in the Aymara population. For more information on this larger issue see <http://www.censo.cl/>.

agricultural competitors, especially in terms of access to State funds and new technologies (Indigenous leader 6 [Male, *ancianos*] 2012). On the other hand, the question of whether the role and participation of Aymara in the Indigenous Community of Chiu-Chiu should still remain passive is also a matter for community debate and indeed fragmentation (Indigenous leader 4 [Male, middle-aged adult] 2012).

The agricultural role of the Aymara has become a big issue for some members of the community, especially for *ancianos*. The Municipality of Calama has various development tools to promote indigenous productive activities through different programmes such as SERCOTEC (Chile's Technical Cooperation Services), CORFO (Chilean Economic Development Agency) and private funds from companies located in the area. In Chiu-Chiu, as well as in other indigenous communities, one of the main issues for the municipal authorities is transforming agriculture (through communitarian and individual initiatives) into a more competitive and more economically 'viable' activity: "There is no homogeneity to produce large-scale vegetables or to have production during the whole year" (Municipal authority 1, 2012). For instance, the promotion of greenhouses has seen positive results in the Aymara community but not in the Atacameño, mainly because it implies changes in the way of irrigation, and *ancianos* reject this type of initiative: "They are community members and they defend their solidarity (...) so they are not open to use new technologies. It's good that they want to rescue their ancestral roots but the vanguard is taking today's market forward" (Municipal authority 1, 2012). *Ancianos* of the community confirm this situation as they try to differentiate their type of agriculture from the Aymara: "There are large differences between an Aymara farmer and an Atacameño farmer. The Atacameño always use natural fertilizer, respect natural cycles and let rest a part of the land; the brother Aymara plant all and don't use natural fertilizer but chemical ones" (Indigenous leader 6 [Male, *ancianos*] 2012).

Middle-aged adults tend to be split over the Aymara role here. Thus, some of those who inherited land and therefore are dedicated to agriculture also have a critical stance: "The main conflict is that many Aymara bought their land and left. Now they are renting their land and therefore they do not live from agriculture. However as they are members of the community, the community has the obligation of giving them water" (Indigenous leader 2 [Female, middle-aged adult] 2011). However, other middle-aged adults are more open to receiving and incorporating the Aymara dynamics in the community: "The thing is that I am

not of that mentality (thinking of the Aymara as rivals) I don't have differences between Aymara and the Atacameño" (Indigenous leader 4 [Male, middle-aged adults] 2012). When talking with young members of the community it can be seen how this trend has changed in some members of the younger generation as they recognise the important role that the Aymara have had in agricultural production: "If you see today's production, the Aymara is the group that is giving all the agriculture to Chiu-Chiu" (Indigenous leader 11 [Male, younger generation] 2012). Indeed, some of them understand that most of the problems that *ancianos* and some middle-aged adults have with the Aymara are related to the lack of Atacameño business capacity: "The Aymara is always searching for the business opportunity, however the Atacameño is waiting for it" (Indigenous leader 11 [Male, younger generation] 2012). In short, it can be seen that the new generations are more open to the Aymara agrarian presence.

This presence has also provoked internal differences among the Atacameño regarding the role of this ethnic group in community structures like the Indigenous Community of Chiu-Chiu. Currently, the Aymara play a passive role in the Community, which means that they have all the benefits of the community (access to land and water and scholarships, among others) but cannot vote in the Assembly (of the Indigenous Community of Chiu-Chiu) and therefore cannot be elected as community leaders (Indigenous leader 4 [Male, middle-aged adult] 2012). As a youth states, the inclusion of the Aymara as passive partners was an odd decision that affected their relations, basically because they violated the Indigenous Law and did not give the Aymara access to vote: "When the community was constituted the Aymara were included as passive partners, violating the Indigenous Law (...) This Law says that the community must be only one ethnicity and Chiu-Chiu included two" (Indigenous leader 11 [Male, younger generation] 2012). Therefore, although the Aymara have been part of the community since its Constitution and even before, there are legal principles that do not allow this ethnic group to have an active role in the community, as they do not have an ancestral links with the territory.

During fieldwork this argument was frequently used by some *ancianos*, as they did not see why the Aymara should have a more prominent role: "They are interested in the money, not in the welfare of the village, and do not cooperate either (...) some of them cooperate, but others nothing; they use the water of the community, electricity of the paddocks but do not know how to thank" (Indigenous representative 6 [Female, *ancianos*] 2012). In this

regard, the role of the Aymara in the community has generated differences between *ancianos* and other age groups. On the one hand, many middle-aged adults agree that the Aymara should have a more active role as they have shown interest in the community since its formation: “There were some Aymaras that constituted the Indigenous Community of Chiu-Chiu (...) there were 70 Atacameños and 4 or 5 Aymara” (Indigenous leader 4 [Male, middle-aged adult] 2012). They argue that their participation in the Neighbourhood Council, as it does not discriminate by ethnicity, is proof of community commitment, criticising the pragmatism of the Indigenous Community of Chiu-Chiu: “The problem between the Neighbourhood Council and the Indigenous Community of Chiu-Chiu is that the first one includes all types of person, despite their religious thoughts, cultural beliefs, indigenous precedents, every person can be part of it” (Indigenous leader 9 [Male, middle-aged adult] 2012). On the other hand, young members of the community promote ideas of integration as they feel that the Aymara are good: “[The relationship] is good, yes it’s good. I think there have been problems, but only of some people (...) The Aymara has acceded to land here, they have their kids at school, they are good neighbours” (Indigenous representative 4 [Male, younger generation] 2012).

Nevertheless, the positive feelings that both middle-aged adults and the younger generation hold have been affected by the fact that a small minority of Aymara families are dedicated to the drug businesses. In this regard, during fieldwork some members of the Indigenous Community of Chiu-Chiu identified three families that were dedicated to the sale of cocaine that was prepared and processed in Bolivia. As this social problem is not within the scope of the present research, it will be considered only in terms of its impact on agriculture. These families are dedicated to agriculture, as well as to other activities, only for the purposes of ‘money laundering’; therefore, they reduce produce prices, meaning these families are only engaged in subsistence agriculture: “A dealer who sells drugs uses agriculture to justify their money” (Indigenous leader 9 [Male, middle-aged adult] 2012). Consequently, to some extent all age groups agree that this situation has affected the inclusion of this ethnic group in the community, leading to some racial stereotyping: “What is the difference between those people and the people who live here. They seek easy money. They may have the best things, but in knowledge, ideology, they are very basic” (Indigenous leader 9 [Male, middle-aged adult] 2012).

6.2.3 Urban and rural dynamics: Shadows of Calama and San Pedro de Atacama

A third way in which we can see how IGDs have become crucial to the possible fragmentation of a collective identity, has to do with the period of transition that the Indigenous Community of Chiu-Chiu is facing today. While all indigenous communities of the Loa Province have seen decreases in their populations due to migration to urban centres, Chiu-Chiu is the only village that has increased its population, which is highly relevant to our concern here about community cohesion. According to the 2002 Census Chiu-Chiu had 322 inhabitants,²⁷ however the population at present is over 850 inhabitants due to the migration of contractor workers for mining and/or State projects and other ethnic groups, as was mentioned before (Indigenous leader 10 [Male, *ancianos*] 2012). This situation has focused special attention on the village by State authorities, entrepreneurs and mining companies, as it is a place with better infrastructure and is very well located. As one local official argued: “Chiu-Chiu is one of the villages that has the highest level of development (...) More significant increases in population are seen in Chiu-Chiu due to its proximity to Calama (and) because it has moderately resolved domestic water access, Internet connection, roads... in a certain way Chiu-Chiu is the most developed village” (Municipal authority 3, 2012). Despite all the problems that this village has been facing regarding water scarcity, it has become (when compared with other communities in the Loa Province) a niche community of sorts with diverse opportunities, such as Public housing projects.

This new status has generated problems within the community, mainly because its administration has started to have more conflict, as differences crop up as to the path that the community should follow. In general terms, members of the Indigenous Community of Chiu-Chiu identify three possible options: to stay how they are, to become a rural version of Calama mainly oriented to mining (see Photo 6.2), or to become the San Pedro de Atacama of Loa Province which means tourist development (Indigenous leader 3 [Female, *ancianos*] 2011). Although each option has pros and cons for members of the community, analysing the IGDs it is possible to clarify the viewpoints of the different age groups when dealing with this situation. While some *ancianos* do not want to change the way Chiu-Chiu looks today, *middle-aged adults* and the younger generation are more open to capitalising

²⁷ As mentioned, the Chilean government has been advised to annul the latest census, taken in 2012, because it failed to account for nearly 10 per cent of the population. Therefore, this document will use mainly information from the reputedly more reliable 2002 Census.

on the present opportunities that Chiu-Chiu has within the Loa Province. As an older resident said: “They (State authorities and companies) know who is weaker (...) [middle-aged] adults and youth are more enthusiastic for money or jobs (and therefore easier to handle)” (Indigenous leader 6 [Male, *ancianos*] 2012).

Photo 6.2. Aerial photo of the city of Calama



Source: Plataforma Urbana (2012)

The position of *ancianos* is simple: they do not want to become either Calama or San Pedro de Atacama. They express uncertainty about the social consequences that the massive arrival of migrants could have on their future. This is particularly relevant for older women: “I would not like Chiu-Chiu [to be] larger or more crowded (...) Maybe in a couple of years this will become San Pedro de Atacama. (...) I like it this way” (Indigenous leader 3 [Female, *ancianos*] 2011). On the one hand, the presence of contract workers who are housed in Chiu-Chiu has affected the state of the community infrastructure and peace, while not providing any direct local benefit: “Mining comes (...) for some of us it doesn’t mean anything, doesn’t give us anything, to the contrary it hurt us” (Indigenous representative 6 [Female, *ancianos*] 2012). In this regard, they are currently not very concerned about such miners as they do not interact with members of the community: “About the contract worker I am not worried, because they are gentleman that work 7 days and then they are gone (...) I don’t think they are going to stay here” (Indigenous leader 10 [Male, *ancianos*] 2012). However, they believe that there is a constant risk, although mining companies prohibit their interaction: “I think they have rules although this would be Sodom and Gomorrah (...) otherwise in those parties, only men and the ladies, who knows what will happen” (Indigenous leader 7 [Female, *ancianos*] 2012). In short, although contract workers are encouraged by the mining companies not to interact in the village,

many *ancianos* believe that this is not so easy in practice, so they see a potential risk in the case that migration increases exponentially. On the other hand, drug trafficking as happens in San Pedro de Atacama is something that especially worries the older members of the community as it could destroy traditional activities such as agriculture: “(The case of drugs) Of course it hurts us. Happily in Chiu-Chiu it has not happened yet as (strong as) in San Pedro de Atacama (...) (we) still have to defend it” (Indigenous leader 10 [Male, *ancianos*] 2012). On this point, the older members of the community insist that the State authorities do not consider the social consequences of these migrations. In fact, currently there are entrepreneurs from Calama selling land that was used for grazing without the permission of the Indigenous Community of Chiu-Chiu, showing the lack of control the authorities are exercising, bearing in mind that the village of Chiu-Chiu belongs to an ADI (Indigenous leader 10 [Male, *ancianos*] 2012).

Although this situation is generating problems, middle-aged adults are not as worried as *ancianos* mainly because they recognise that the status of the village allows new possibilities for development. Members of this age group believe that this new scenario provides the opportunity to improve the lack of infrastructure and services in the community. For them, both Calama and San Pedro de Atacama have advantages that are critical for the village and the fact of having more people could help to achieve them: “If you see San Pedro de Atacama (...) they have banks, sewerage, things that you don’t see here. We are still a village (...) for instance we don’t have sewerage” (Indigenous leader 1 [Male, middle-aged adult] 2011). Also, they consider that the Municipality of Calama has not properly addressed the needs of the village, and the increasing population of Chiu-Chiu could help them to increase pressure for new programmes and projects: “We depend on the Municipality of Calama, all the Upper Loa depends on the Municipality of Calama. I think that’s the reason why we have a lack of advances” (Indigenous leader 1 [Male, middle-aged adult] 2011). Even more, they also believe that Chiu-Chiu is in a position to become separate from the leadership that San Pedro de Atacama has had in the region, as their leaders have focused their support on the urban indigenous people located in Calama instead of the rural indigenous communities of the Upper Loa: “The division between Upper Loa and San Pedro de Atacama has to do with the fact that (the latter) has opened the doors to urban indigenous development and they (thereby) forgot that they depend on the rural indigenous villages” (Indigenous leader 8 [Male, middle-aged adult] 2012). In short, although this age group is not willing to transform the community into an

urban place like Calama or into a rural tourist centre such as San Pedro de Atacama, they believe that they must get the best elements of both cities. While Calama is considered good in terms of infrastructure and services, San Pedro de Atacama is well recognised by State authorities and other actors (Academy, NGO) as a place with strong leadership, they believe.

The younger generation shows a different way of analysing the community's future. For them the dialectic between urban and rural development is not a big issue, as they are usually moving between Chiu-Chiu and urban cities such as Calama, Antofagasta or Iquique in their daily lives already. The arrival of contractor workers has increased the presence of young people in the village generating more sport and social activities that has been well received by the younger generation. As a young member indicates: "Youth go and play football with the contractor workers, they are friends, they do barbecues during the weekend and they turn (...) into friends" (Indigenous representative 4 [Male, younger generation] 2012). In addition, members of this age group believe that migration has also become a new business opportunity for members of the community as they have started to rent houses and rooms: "I think that people have started to improve their houses, to make rooms to rent, [it] has allowed people renting their small houses and having another income" (Indigenous representative 4 [Male, younger generation] 2012). In addition, the younger generation believe that dialogue and conversation with other actors is the best way to define the future of the community, even regarding water issues which is one of the main issues of contention: "Of c`ourse we can sit at the table with mining companies, the Association of farmers (...) joining all of our water rights and maybe part of another institution with another name (...) association, community, and see the legal aspect" (Indigenous leader 11 [Male, younger generation] 2012).

The younger generation thus represents a group that promotes dialogue with other actors such as (usually youthful) work contractors and tourism entrepreneurs because they give new possibilities to their families. As an external entrepreneur said, this age group has promoted tourist activities in the village but *ancianos* and some middle-aged adults have opposed them for fear of becoming like San Pedro de Atacama: "In San Pedro de Atacama nobody cultivates land, and youth have poorly qualified jobs but are not the owners of the hotels" (Civil Society 6, 2012). However, young members do not have this fear as their link with the community is usually now well beyond agriculture, having lost

their chance to access both land and water (Indigenous representative 4 [Male, younger generation] 2012). Indeed, the cultural activities that they favour predispose them to outsiders: tourism could be a good opportunity for positioning the community and their cultural heritage elsewhere as has happened in other Atacameño communities such as Ayquina.

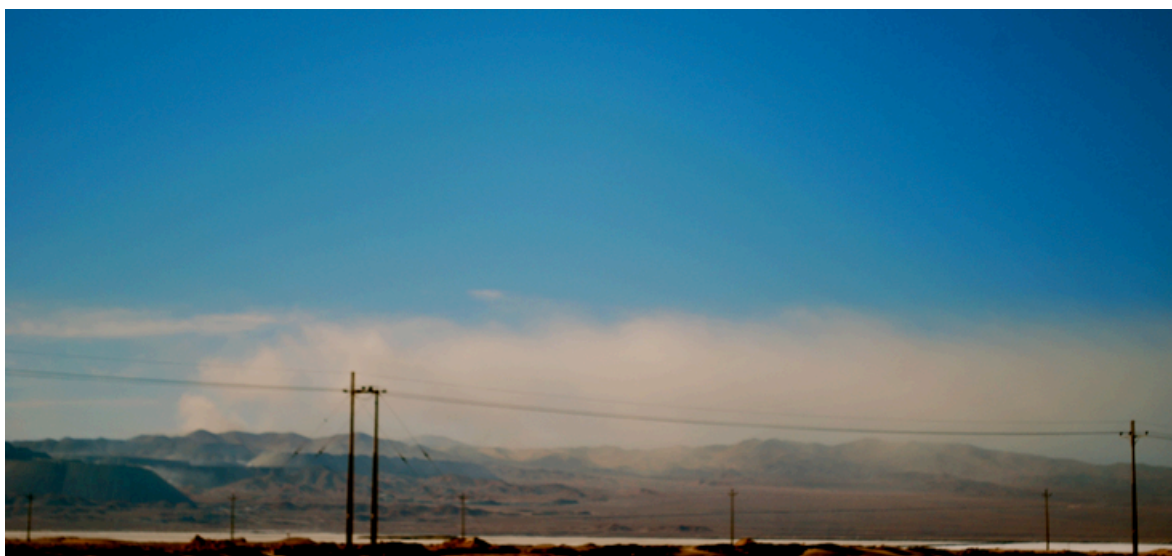
6.3 'EXTERNAL' ADVANTAGES OF INTERNAL COMMUNITY SCHISMS

The internal problems mentioned above have generated difficulties in the way this community interacts with external actors, especially mining companies. In this sense, members of all age groups agree that mining companies are especially powerful as they now perfectly well know their internal divisions and take advantage of them (Indigenous leader 8 [Male, middle-aged adult] 2012). Still, there are leaders that show a more radical position stating that mining companies know all the information about the indigenous leaders of the area: “Companies know [who are] conflictive leaders, leaders with education (they define) this one is easy, this one is corrupt (...) they know all” (Indigenous leader 6 [Male, *ancianos*] 2012). Therefore, overall, members of the community do believe that mining companies take advantage of their weaknesses and avoid considering the real needs of the community, which are mainly based on water scarcity. Of all the mining companies located in the area, Codelco seems to be the least committed to village needs considering the overuse of water, which they have long taken from the Loa River (see Chapter 4): “Codelco does advertising to give a [small] crumb compared to the benefits they obtain from water” (Indigenous representative 7 [Male, *ancianos*] 2012). Consequently, the community in general has a worse opinion of Codelco than of other mining companies such as El Abra and Collahuasi.

When analysing Codelco's agenda, it can be seen how members of this company do not consider water scarcity as the main local issue. They have instead tried to instil the idea that the main problem in the community is air and water pollution due to the tailing dam 'Talabre,' and they have been working in that direction over the last 5 years: “The division (of the company) has incorporated a monitoring station in the village with the aim of keeping records and achieving the credibility they need” (Big Corporation representative 2, 2012). Although this problem is relevant to the community (see Photo 6.3) and members of different ages have been discussing in recent years how to bring Codelco to account

because of the health consequences of Talabre, it is not the only problem that they have with Codelco (Indigenous leader 8 [Male, middle-aged adult] 2012). Indeed, the lack of water due to chronic overuse by Codelco has gained more relevance since many residents have started to realise how their development and prospects have thereby been put into question (Indigenous leader 6 [Male, *ancianos*] 2012). Indeed, members of all generations agree that Codelco has benefited enormously from the application of the Water Code in 1984 and therefore should respond to the shortage that is affecting the province: “Codelco took advantage of that situation (...) maybe they tell to them [the authorities] here you have more money but tell the farmers this history” (Indigenous leader 4 [Male, middle-aged adult] 2012).

Photo 6.3. Air pollution from Chuquicamata’s operation



Source: Author. November 2011

For this reason, it is possible to argue that the relations between the Indigenous Community of Chiu-Chiu and Codelco are strained, as the former do not feel that the latter is really concerned about their claims. While Codelco promotes in its advertising a special commitment to indigenous people with the aim of endorsing local sustainability (Codelco, 2003), indigenous communities deny the positive impact that Codelco’s initiatives have had at the local level. They do not believe in the ‘good intentions’ that Codelco has been promoting with Codelco’s ‘Good Neighbour’ Programme. This argument by people in Chiu-Chiu is based on the problems that Codelco’s overuse of water has also generated in other indigenous communities of the Loa Province such as San Pedro Estación (Carrasco,

2011) and Toconce (Yañez and Molina, 2011), thereby questioning the true interests of Codelco in sustainability. Indeed, the way Codelco avoids addressing the consequences of water scarcity for indigenous communities in northern Chile within their Sustainable Reports demonstrates a lack of interest in local visions of development (Molina, 2012).

This section thus analyses the relationship that Codelco has with water issues and the ways this company has taken advantage of the community's internal differences in terms of priorities and organisation to advance its own agenda. Unequal power relations, asymmetries of information, and initiatives to fracture social cohesion are analysed here, with the aim of showing how different age groups identify and respond to these dynamics.

6.3.1 Trapping *ancianos*: Codelco's interaction with water

Codelco does not officially recognise the immense damage that it has caused to the indigenous communities of the Loa Province regarding water access. Although it confirms the importance of respecting indigenous rights according to national and international standards such as ICMM, IFC and the ILO Convention 169 (Codelco, 2011), the firm fails to acknowledge all the problems that indigenous communities have been facing during the last 50 years due to water scarcity (Molina, 2012). In fact, even though Codelco has historically faced problems with indigenous communities due to overuse of water (Carrasco, 2011), they always emphasise the positive contributions that they have made instead. This can be seen in the argument of a member of the company: "Codelco is giving water not only to Calama but to almost 80 per cent of the indigenous communities of the Loa River (...) only to the city [of Calama] we give 120 litres/second" (Large Corporation representative 1, 2012).

In this context, the discourse surrounding Codelco and water resources is not easy to follow as they link different types of water rights thereby confusing vulnerable groups such as *ancianos* with their convoluted arguments. Firstly, Codelco insists that they use only a part of the water rights that they have registered with the DGA (General Water Directorate), otherwise they would completely deplete the Loa River affecting the whole Loa Province: "Codelco uses nearly 2,000 litres/second (...) and Codelco should be using 10 times more than that for productive activities and routines, but their zeal is to optimise water resources" (Large Corporation representative 2, 2012). They blame the DGA

because they granted more water rights than the Loa River could sustain, increasing its vulnerability: “The DGA did a serious thing at that time (in the 80s) and now if we all take out the water rights that we have, the DGA would be indebted to 200%, 300%, 500% of water, as the Loa River never has had the capacity to give all the water rights they registered” (Large Corporation representative 2, 2012). They try to make out that they are against the Water Code since it has overstretched the capacities of the Loa River: “There are brutalities in the Water Code, it doesn’t have a logic of sustainability and I think it was done by someone that never used water” (Big Corporation representative 1, 2012).

Secondly, Codelco question their portrayed relation with the communities arguing that they are currently providing more water for domestic purposes than the 2 litres/second that *ancianos* presume, showing an act of ‘good will’. Although the Water Code (Art. 27) requires the expropriation of water rights for domestic purposes, representatives of Codelco insist that they are currently providing more water than the law requires, but they have not formalised this situation. In short, they agree that the main problem has to do with the lack of communication of the activities that the company has been carrying out regarding water: “It’s not formalised (...) there is a company unwillingness when telling other people what they have been doing (...) and communities also do their movements (of pressure)” (Large Corporation representative 1, 2012). Here, Codelco uses this contribution encouraged by law, as an argument for compromise and empathy, but also as a matter of domination. In addition, they try to maintain that it is not easy for Codelco, as people think they are able to change the State’s direction regarding water resources, but of course they are not able to do so: “We can insinuate things, say things, but we don’t have the capacity to influence public policies” (Large Corporation 1, 2012).

Therefore, some *ancianos* in the community have started to feel that fighting against Codelco is extremely hard and hopeless. On the one hand, they understand that the knowledge that Codelco has about water rights is considerably greater than theirs, therefore they need to find support from other actors as this struggle goes beyond their capabilities: “Demanding [something of] Codelco requires a lot of professionals, and studies, anthropologists, geologists, lawyers, environmentalists, we have to do a good job, we cannot make mistakes” (Indigenous leader 6 [Male, *ancianos*] 2012). Indeed,

Codelco's project named "Pampa Puno"²⁸ has affected the image of the company, as it includes the extraction of underground water that will affect the Loa River's capacity: "Now, for instance, Codelco will take water from Pampa Puno for all the mining companies that they are starting. In a couple of years they are going to start, they have wells and water rights" (Indigenous representative 7 [Male, *ancianos*] 2012). On the other hand, members of this age group has accepted that Codelco does not care about the future of the community and have already become resigned as to the future of both the village and agriculture: "They are taking the water and killing the villages (...) I see agriculture dying, it has been decreasing over the last 10-15 years" (Indigenous representative 3 [Female, *ancianos*] 2012).

Thus, members of this age group do not believe that Codelco has good intentions, but they do not have sufficient ability or knowledge to officially confront them. And, furthermore, Codelco understands that their opposition is not powerful enough, as they lack the technical tools to sustain their critique. Therefore, they have begun to delegitimise *ancianos'* leaders and their claims, arguing that in Calama they have better relations with the local communities as they are better prepared: "Although it's tough for us, you also have a counterpart that is at the same level. That is good" (Large corporation 1, 2012). However, *ancianos* are not willing to accept these unequal relations and are opening dialogue with other actors such as municipal authorities, as they believe that this company must pay for all the damage caused to agriculture: "I don't swap natural resources, I don't swap anything (...) I am demanding them to let me work [on my land]" (Indigenous leader 6 [Male, *ancianos*] 2012).

6.3.2 Weakening *middle-aged adults*: Sustainability of projects depends on leaders

Codelco has carried out several projects in Chiu-Chiu and this has influenced how they are viewed by middle-aged adults in the community. Over the last 10 years this company has invested in infrastructure, equipment and community projects, among others. However, most of the initiatives that Codelco has supported have not been successful. The museum, communitarian restaurants, and the Inca Coya project are some emblematic examples of the lack of sustainability of the company initiatives. Regarding this situation, members of Codelco believe that one of the main problems with the village has to do with the absence

²⁸ As mentioned in Chapter 4, Pampa Puno is a Codelco project that will extract 400 liters per second from the High Basin of the Loa River, for the purpose of supplying the expansion of Chuquicamata.

of effective leadership. Members of this company claim that the community is not well organised and hence not well prepared to comprehend what Codelco is trying to develop in the area. For instance, in corporate eyes, divisions between the Atacameño and the Aymara are a demonstration of weakness, which obviously affects their capacity to dialogue and to understand the initiatives that the company is developing: “For me it is unfavourable that they [Atacameño] are not well organised and that they have a division with the Aymara for me it is also unfavourable (...) To be all together, so that they are associated and well prepared (...) in that sense we can generate dialogue and better knowledge” (Large Corporation representative 2, 2012).

The last three years have been particularly difficult for the Indigenous Community of Chiu-Chiu, and Codelco has taken advantage of that situation. As mentioned, leaders of Chiu-Chiu have faced problems regarding accountability and participation and have been criticised because of the lack of sustainability of their projects such as the Inca Coya Lagoon and the museum, which are not currently in operation. Here, the community has been divided, making it difficult regarding decision-making as to how to best lend support to the initiatives developed (Indigenous leader 3 [Female, *ancianos*] 2011). In view of this situation, Codelco has decreased its investment in initiatives (the last one was the ‘Inca Colla Radio’ in 2010), arguing that collective fragmentation was detrimental to their initiatives mainly because it affected the way Codelco interacts and negotiates with this community, since they do not have a counterpart to talk with. Indeed, they began to note that the agreements they made with leaders were not necessarily the ones that the Assembly supported, showing their concern about the impact of their activities: “You also cannot be part of their functional structure and you have to wait until they organise (...) and that is complicated for us. Chiu-Chiu is complicating us because there is no one to talk with” (Large Corporation 1, 2012).

This situation has been particularly relevant for middle-aged adults, as members of this group have held control of the leadership in recent years. Members of this group state that the community does not have good relations with Codelco, as the latter does not promote development for the community. Also, they feel that this company is not really concerned about local welfare: “We gain projects. In that sense I should not complain because with Codelco we have won several projects as a community. Basically, I don’t know if it’s because the projects are prepared well or because they want us to be quiet” (Indigenous

leader 1 [Male, middle-aged adult] 2011). In this sense, although the community used to consider access to projects funded by Codelco as a good sign of management and leadership, nowadays it has started to generate conflicts among members, as these projects never seem to have any continuity. This happened with the *Pucara*,²⁹ which is not in operation now although Codelco invested a significant amount of money in it: “Codelco gave [many] millions to [complete] the [heritage-minded rehabilitation of the] *Pucara*, they did the work but now it is abandoned” (Indigenous representative 3 [Male, *ancianos*] 2012).

Accordingly, the company mentioned that collective fragmentation and internal problems have acquired special relevance, as Codelco is shifting from a welfare-based outreach vision to a structural-based vision of outreach focused on sustainability and social licence (Large Corporation 1, 2012). For instance, *Calama Plus*³⁰ appears to be an empirical demonstration of the new initiatives that Codelco is developing in the region, designing several initiatives to improve the quality of life in Calama: “In practice what *Calama Plus* is doing, is for instance the same type of work that we are implementing/carrying-out now, it is the best evidence we have that in the 1980s [communitarian relations] were developed incorrectly” (Large Corporation 1, 2012). Therefore for them it is important to have a counterpart with clear aims and objectives and Chiu-Chiu has not reached that stage. However, middle-aged adults of the community do not refer to this initiative when talking about Codelco, as it is primarily based in Calama (and does not even consider indigenous communities) and was developed by professionals from Santiago that did not have much experience in rural Calama. Therefore, members of this age group are worried that Codelco is following the same trend as the Municipality of Calama, in terms of focusing their initiatives in urban Calama, as they noted in the campaign slogan of the current mayor: “I was upset with the slogan ‘Calama first’ because he is not mayor of the city but of the municipality, so what happens with the (...) communities” (Indigenous leader 8 [Male, middle-aged adult] 2012).

On the whole, middle-aged adults leading the community of Chiu-Chiu have started to feel isolated. Failure of Codelco-linked projects, internal differences regarding the arrival of the

²⁹ A *pucara* is the ruin of a fortification made by the natives of the central Andean cultures. (Ruiz and Albeck, 1997).

³⁰ *Calama Plus* is a public-private initiative that develops projects in areas such as culture, tourism, road development and society for the Municipality of Calama (Calama Plus, 2013)

Aymara, and difficulties establishing positive relationships with external actors have weakened the middle-aged adults' leadership, generating internal conflicts. Codelco has used these conflicts, in turn, to delegitimise communitarian claims and to avoid promoting specific initiatives to address the real problems facing the Loa Province. Indeed, this company has reoriented their initiatives towards a wider public under the premise that 'Codelco Good Neighbour' did not take into account the demands of the communities, and therefore they are trying to change that by giving priority to projects that emerge from local needs: "The problem of the logic of the 'Codelco Good Neighbour' was that they arrived with things [already defined]" (Large Corporation 1, 2012). In this regard, they say that they want to avoid projects that lack sustainability, and hence are waiting for leadership that will guarantee better results. In other words, the poor results of previous community based projects in Chiu-Chiu have been due to the absence of local leadership, rather than poor management by the company, at least as seen from the Codelco viewpoint.

6.3.3 Attracting the young: addressing effects instead of causes

Codelco agrees that the relations they have had with the Indigenous Community of Chiu-Chiu have weakened in recent years. In this sense, members of Codelco agree that the *Worktables*³¹ that they have tried to set up in the area have worked intermittently and have been used only to deal with emergencies rather than to generate permanent work: "We need continuity in worktables to face problems permanently and not where 'fires' are happening" (Large Corporation representative 1, 2012). They assume that the main reason why these worktables have been so sporadic has to do with the fact that communication with *ancianos* and middle-aged adults of the community has not been easy, as they do not have enough education and openness to the initiatives that the company is promoting: "You come with a lot of information but you are talking with a community member that is dedicated to animals, to land, to tourism and don't need to know the way a monitoring station works" (Large Corporation representative 2, 2012). In contrast, they identify in the younger generation a new possibility for dialogue, as they have stronger communication skills and more formal education: "Young people are arriving in the village and are generating new ideas, new knowledge that allows us to even dialogue in a better way because people are getting prepared" (Large Corporation representative 2, 2012).

³¹ *Worktables* are systematic meetings that the company has with leaders of the community (Indigenous leader 6, 2012).

In general terms, the idea within Codelco is that the village of Chiu-Chiu is shifting and that a cultural change is occurring and that knowledge of the company is improving. Indeed, the fact that there is a young local woman working for Codelco shows the new position that young members of the community are taking towards the company: “Generational changes that you see today in Chiu-Chiu, because of the Indigenous Law and the new opportunities that youth have to migrate and study, and that now are coming back to their land” (Large Corporation representative 2, 2012). In this sense, members of Codelco agree that this opens the possibility for new leaders to become representatives, hopefully increasing the level of dialogue, as occurred in Calama: “Calama has a strong organisation, with very impressive leaders (...) if I was seated in the other side of the table I would admire them” (Large Corporation representative 1, 2012).

The positive position that Codelco has regarding the *younger generation* could be seen as an intention to change the historical opposition that the community has had against them. Identifying the lack of opportunities that agriculture has in the area due to water scarcity (following the same trend as livestock), the possibility of being a potential workplace has created a number of expectations among the youth, as Codelco applied for two projects into the Service of Environmental Assessment (SEA),³² namely ‘Quetena’ and ‘Underground Chuquicamata’ to give continuity to the production of Chuquicamata.³³ As a young member of the community stated: “Codelco is the easiest way of earning money apart from drugs” (Indigenous representative 1 [Male, younger generation] 2012). In this sense, it is possible to see how Codelco tries to suggest that they contribute (through job opportunities, among others) to develop all indigenous community members, especially the youth (Large Corporation representative 2, 2012). However, *ancianos* argue that Codelco does not provide labour opportunities, as the younger generation does not have technical experience, prioritizing instead foreigners and members outside of the *younger generation*, as they claim: “They say that they are companies that bring specialized people, even to be a ‘truck signalman’ or a ‘truck assistant’ (...) It is a pretext, they never

³² SEA is public institution whose main role is to manage the environmental instrument called SEIA (Environmental Impact System). For further information: www.sea.gob.cl.

³³ According to the testimony of a Codelco representative, the project ‘Quetena’ entered the SEA in 2011 with the aim of making the transition between ‘Chuquicamata’ (open pit) and Underground Chuquicamata, which is expected to be producing at 100% between 2025 and 2030 (Large Corporation representative 2, 2012).

searched for people here. They never searched for workers here in the village” (Indigenous representative 9 [Female, younger generation] 2012).

In this way, Codelco, instead of helping to solve issues of water scarcity that are affecting this community (particularly *ancianos* and middle-aged adults because of their links with agriculture), have started to provide incentives to young members of the community not related to such natural resources. In fact, most of the initiatives that Codelco has carried out over the last few years have been linked to tourism or cultural activities, as they ‘mesh’ better with the young people’s vision of development. One example is the support that Codelco gave to the musical group ‘Pat Ta Hoiri’ in the making of the documentary “To the rescue of the *Kunza*” in 2009 (Hori, 2009). Indeed, members of this group argue that other mining companies such as ‘El Abra’ also have developed initiatives in the village that are not focused on water issues: “They installed cyber technology which on one side is good because there is more communication with the world (...) but they don’t do anything without a purpose (...) they cooperate and they are active with the villages but always waiting for something (...) litres of water” (Indigenous representative 8 [Male, middle-aged adults] 2012).

Overall, Codelco has focused on its relations with the younger generation in the community, thus bypassing the role of the Indigenous Community of Chiu-Chiu altogether. Due to the internal differences that *ancianos* and middle-aged adults have regarding migration and the path that the community is following, Codelco has identified in the younger generation a possible ally considering non-agricultural job prospects for them. In this way they have changed the focus of their initiatives, not in terms of solving water scarcity, but instead focusing on helping to address the consequences of this issue in terms of economic and social expectations within a safe cultural focus.

6.4 SUMMARY

The aim of this chapter has been to set out how selected political negotiations with external actors (mainly the big mining firms, led by Codelco plus some official agencies) are impacted by IGDs. While the first section looked at the way IGDs reflect who has the right to negotiate with outsiders and the role that the community has in these negotiations, the second section analysed the way IGDs demonstrate collective fragmentation when

dealing with external actors due to external pressure from both State authorities and large corporations. Finally, the third section analysed the extent to which Codelco has taken advantage of internal community schisms linked to IGDs to present social cohesion while improving their reputation.

In addition, taking into account that this community's ideas about development are elaborated within a wider context (see Chapter 5), this chapter also shows the way that Codelco and selected State agencies have impacted both the interests and priorities of this community. Indeed, it empirically demonstrates through IGDs the way that local communities have complexly redefined their demands and social claims, which have often suffered when negotiating under asymmetric conditions with non-local actors.

CHAPTER 7. INTERGENERATIONAL DYNAMICS AND COMMUNITY OUTCOMES

Como torrentes brotan mis palabras para hablar de mi antigua raza brava. La flecha con sangre (...) ya fue lanzada, la guerra que lleva un siglo ya declarada (...) volaron muchos cóndores heridos.

(My words gush like torrents to talk about my old brave race. The bloody arrow (...) is already released, war was declared a century ago (...) many condors flew wounded)

Pukará, Pat Ta Hoiri Musical Group. Chiu-Chiu, Chile

The aim of this chapter is to assess to what extent Intergenerational Dynamics (IGDs) shape how the perceived costs and benefits of any outcomes of community negotiations with external actors are distributed around the community. Specifically, it analyses how IGDs may reflect and reinforce unequal local power relations in the distribution of these outcomes (section 7.1), as well as the way gender relations may constitute another dimension of unequal distribution of external outcomes (section 7.2). This chapter also assesses to what extent such dynamics reflect ‘resistance’ to community inequalities against external actors, mainly linked to water resource outcomes (section 7.3).

7.1 PERCEIVED COSTS AND BENEFITS OF OUTCOMES LINKED TO UNEQUAL POWER RELATIONS

The presence of large corporations in northern Chile generates a number of problems in terms of the distribution of perceived costs and benefits of these outcomes. Municipal authorities, as well as indigenous and social leaders, among others, have shown how the externalities associated with mining companies are not evenly distributed (Civil Society 4, 2012). The case of the Municipality of Calama is particularly relevant as it is surrounded by Codelco mining sites, in particular Chuquicamata, which is located 18km from the centre of the city and 20km from Chiu-Chiu itself. Recently, representatives of this city and of rural indigenous villages such as Chiu-Chiu, have started to protest against the lack of benefits that they receive from Codelco, arguing that most benefits are given to the centre of the country, especially to Santiago: “Everyone says the same (that Codelco is the salary of Chileans) but not of all Chileans” (Municipal authority 4, 2012). A climate of discontent has been established in the area, pushing Codelco, as well as other companies, to try and improve their community initiatives.

This situation was particularly important during 2012 when fieldwork for this research was being undertaken. Thus Calama-led demonstrations spread in the region as can be seen in Photo 7.1. In general terms, the people of Calama were fighting for political decentralisation, the modification of the Water Code to protect local water resources, and greater access to 5 per cent of the income that Codelco generates for the nation's public purse (El Mostrador, 2012). A citizens' initiative was created under the name of FONDENOR (Development Fund for the North) with the intention of improving the situation for northern cities located near large mining operations. Indeed, this initiative received the support of the Senator and former presidential candidate José Antonio Gómez, who presented a law project (approved by the Senate on November 2012) to create a development fund with resources from large mining taxes for northern cities (FONDENOR, 2012). Consequently, the fact that the welfare and quality of life of northern cities did not improve thereafter started to generate internal differences within Chile, in particular over the role of large corporations, like Codelco.

Photo 7.1 Demonstrations in Calama during 2012



Note: Translation: What would Chile be without Calama?

Source: El Ciudadano (2012)

While this overall situation served to unify cities in northern Chile against the national government, it did not prevent the development of parallel schisms within the affected northern areas themselves. What is of most interesting for the purposes of this research is how the village of Chiu-Chiu continues to have differences with urban Calama. As mentioned in Chapter 6, members of Chiu-Chiu consider that most of the initiatives that mining companies, led by Codelco, are developing in the region (such as the *Calama Plus*)

are based in urban Calama and hence do not recognise the particularities of rural indigenous villages such as Chiu-Chiu (Indigenous leader 6 [Male, *ancianos*] 2012). As a former mayor of San Pedro de Atacama said, people in Chiu-Chiu are in a worse situation than other communities in the area: “Chiu-Chiu is tiny (...) [and the] Chilean system [has] favoured mining [under] the great slogan that justifies all, that [Codelco] is the salary of Chile” (Civil Society 1, 2012). Consequently, the relations between Chiu-Chiu and the Municipality of Calama have also been linked to unequal access to Codelco’s benefits, because the company is not equitable with their contributions, in what some see as a classic ‘divide and rule’ strategy (Indigenous leader 6, [Male, *ancianos*] 2012).

Overall then, this situation reflects the unequal power relations that have manifested in Chile between regions and cities, as the government follows a centralised management strategy of local claims. Indeed, this strategy has generated division within regions and cities, affecting the capacity of local and regional authorities to work together. As was seen during the fieldwork and discussed above, this situation is even worse in local communities such as Chiu-Chiu, as unequal distribution of benefits and costs is arguably more extreme than elsewhere, generating not only tensions among members of the community but also internal fights and out-migration. Analysing IGDs shows how some groups have achieved reasonable results from this situation, while others are still trying to establish basic conditions for survival. This section will thus assess how unequal power relations between regions and cities have also impacted local communities, herein Chiu-Chiu, thereby segregating perceived positive and negative outcomes of mining.

7.1.1 *Ancianos*: Chronicle of a death foretold

The *ancianos* are in a distinctly vulnerable position within the community in terms of outcomes. This group has lost negotiating powers in recent years (see Chapter 6) and, not surprisingly, such political weakness has meant that the benefits from external negotiations seemed to have decreased, adversely affecting their welfare. The situation of water scarcity and the related consequences to agriculture, which are the main issues here, have been relegated to the background. In contrast, other issues that matter more to middle-aged adults and the younger generation, such as educational and labour opportunities, have become the main elements of negotiations, with disregard for how the new management of water rights has changed the *ancianos*’ relationship with their

territory: “The problems that Chiu-Chiu has faced have to do with the fact that before people planted all because water was free (...) (*ancianos*) didn’t have water scriptures, they used what they had, and water that was left was distributed in meadows” (Indigenous leader 10 [Male, *ancianos*] 2012).

Indeed, members of other generations have even started to delegitimise the *ancianos*’ claims regarding water, the better to thereby advance their own preferred claims. The application of the Water Code still has repercussions on the way some *ancianos* negotiate with external actors mainly because they keenly feel that they were deceived, and hence lost an important portion of the community’s heritage that was also vital to their wellbeing. As a middle-aged adult leader of the community states, *ancianos* were unable to understand why they had to start paying for their resources: “Here they don’t understand what happened with [water] (...) they asked them how many acres they have and that they had to do this [follow a protocol] otherwise they had to pay. [*Ancianos* said] I don’t want to do this; I don’t want to pay for my land. (...) There was no dialogue, the military government took power” (Indigenous leader 8 [Male, middle-aged adult] 2012). Yet, however right the *ancianos* may have been here, their approach proved disastrous in the face of official intransigence. Thus, middle-aged adults believed that it was time for them to take charge of external negotiations, in the process reorienting community claims beyond water issues. There was even a sense that ‘if you can’t beat them, then join them’ was the only viable path. For example, the possibility of working in mining seemed to be a good opportunity, especially for the younger generation, as one *middle-aged adult* argues: “I left approximately 50 curriculum vitae [at a mining company] as there are several youth (...) studying engineering that hardly will come to grow carrots (...) Why they cannot work in mining (...)?” (Indigenous leader 4 [Male, middle-aged adult] 2012).

Ancianos have thus lost the most through negotiations. Beside the difficulties that they have had in validating their interests *within* the community, there has been a decrease in the recognition that this age group have received from external actors (see Chapter 6). Indeed, as one *anciano* argued, they have been left behind in the important negotiations, especially ones that the community had with the Quadra mining company regarding a groundwater business: “I wash my hands because I didn’t accept that money, that is the beginning of the rift with the current community board, because we never agreed to settle this water. You think a company is going to be good and will give 80 million pesos to a

community? Only for love of art?” (Indigenous leader 6 [Male, *ancianos*] 2012). Some members of this age group even feel that the community has lost the prestige that it used to have in terms of the protection of natural resources: “Water can give us the opportunity to recognize our mistakes, to get back on track...this was one of the most respected communities” (Indigenous leader 6 [Male, *ancianos*] 2012). However, representatives of NGOs (non-governmental organisations) go further, arguing that the problem in small villages is that the spaces for participation are scarce and hence local leaders have searched for new formal and informal possibilities: “Participation is to write citizen observations that nobody reads and that don’t impact anything and that is heart of the situation” (NGO representative 4, 2012).

To some extent, decreased benefits and increased costs reflect the lack of *ancianos*’ participation over the last few years. Because of differences with the current community board, which is mainly composed of middle-aged adults, some *ancianos* (especially women) have decided to stop participating in the Assemblies altogether, as they believe that the community board does not consider their claims: “The [board of the] community carries out negotiations and they receive the money (...) they say they are going to fix the museum but don’t do it” (Indigenous leader 3 [Female, *ancianos*] 2012). Therefore, some former leaders have begun to feel isolated and have reduced their level of involvement due to internal differences, causing in turn sadness and resignation in this age group: “I love to participate (...) but I don’t do anything (...) I love to help people (...) I love to talk with the authorities (...) It doesn’t matter if I don’t express myself very well, but I really like to go and fight with the *ancianos*” (Indigenous representative 6 [Female, *ancianos*] 2012). Although members of this age group are willing to be part of future negotiations, they believe that the focus of external negotiations with both the mining companies and State authorities is not headed in the right direction, as the current leaders are not prepared to effectively lead on the future of the village: “There are people that are not prepared for the job, I was also not prepared (...) but I prepared myself (...) I listened to *ancianos*” (Indigenous leader 6 [Male, *ancianos*] 2012).

Thus, unequal power relations are graphically reflected in how this group feels that they do not receive benefits from external negotiations though they acutely feel the cost, notably related to water scarcity: “We have suffered the consequences from a law that does not benefit small farmers [like us]” (Indigenous leader 7 [Female, *ancianos*] 2012). However

this does not mean that they are against the benefits that middle-aged adults and the younger generation receive. Here, a different calculation comes to the fore. This situation has to do with the fact that they do not want the villages of the Loa Province to disappear, and therefore they are pushing Codelco to create new opportunities for the younger generation: “So the villages are going to disappear (...) because what is the future for them? (...) They don’t have and Codelco has not invested money in that and they should. What is it that I expect to make youth return [to the villages]? There are several options, I think of tourism” (Indigenous leader 10 [Male, *ancianos*] 2012). However, they believe that the community should also receive benefits in areas that are relevant for its sustainability, especially regarding water and land (see Photo 7.2), and the consequences that the Talabre tailing dam³⁴ has generated in terms of water and air pollution: “We should see big projects (...) The Talabre tailing dam, the situation of water and also the fact of charging taxes as they go through the territory of Chiu-Chiu” (Indigenous leader 10 [Male, *ancianos*] 2012).

Photo 7.2 Lands cultivated by *ancianos* in the village of Chiu-Chiu



Source: Author. December 2011

In short, *ancianos* belong to a group that keenly feels that it has lost out in terms of community outcomes. Although this age group is deeply affected by water scarcity and has suffered directly through the application of the Water Code, they have not been the focus of community negotiations, as these have focused instead on labour and

³⁴ Talabre is the tailing dam used by Codelco for accumulated industrial deposits of Chuquicamata. According to the Sustainability Report of Codelco (2011), the Talabre dam will also store the tailings from 'Ministro Hales' and the sulphide ore from the 'Radomiro Tomic Mine'.

educational opportunities, and on community projects based on infrastructure and equipment.

7.1.2 Middle-aged adults: It's now or never

As was mentioned in Chapter 6, since 2009 representatives of the middle-aged adults' group have assumed important leadership roles in Chiu-Chiu. During the fieldwork, members of different age groups stated that the board of the Indigenous Community of Chiu-Chiu had shifted negotiations with external actors focusing mainly on labour and work opportunities, and on creating business with mining companies. Although some projects (such as The Communitarian Laundry with El Abra),³⁵ were arranged when the *ancianos* also led the board, the arrival of the middle-aged adults to positions of power intensified these types of initiatives, thereby generating intra-community problems related to money and management (Indigenous leader 3 [Female, *ancianos*] 2011). In this regard, members of this group have been criticised because they failed to recover the water rights for the community as the *ancianos* had sought to do before. Indeed, various *ancianos* have criticised their work, arguing that the middle-aged adults have no identity because they do not recognise the symbolic importance of water for the sustainability of the village: "There are leaders that have very good things, but others [have a] lack of identity (...) lack of heart" (Indigenous leader 6 [Male, *ancianos*] 2012).

In particular, criticism has focused on how the benefits associated with community outcomes are not spread evenly throughout the community. This situation can be seen especially in relation to *ancianos* and middle-aged adults that still work in agriculture, as they do not see any benefits from external negotiations with mining companies, since the fruits of such negotiations are solely oriented to new productive activities (such as mining employment and tourism), and to communitarian infrastructure improvements: "That is the fight that I always have with the presidents, because I tell them that it is very little what they give to us. (...) Pollution is too much, and we (...) have a health office that depends on the Municipality [of Calama], which often has no medicine" (Indigenous leader 2 [Female, middle-aged adult] 2011). However, some middle-aged adults reject this view and instead suggest that the way they are focusing on external negotiations with the mining companies has given them and the younger generation new opportunities: "As we

³⁵ In 2007, El Abra Mining installed a laundry in the village of Chiu-Chiu with the aim of providing employment and progress to the community (El America, 2010).

have started to talk with Collahuasi about the ‘Apprenticeship Course’, people have started to have another taste [about mining] (...) and see other alternatives” (Indigenous leader 1 [Male, middle-aged adult] 2011).

It is possible here to see a division *within* this age group concerning community outcomes. While some middle-aged adults are oriented to agriculture and therefore experience no protection against declining yields linked to water scarcity, as well as chronic lack of benefits in terms of agricultural improvements by way of compensation for this loss (Indigenous leader 2 [Female, middle-aged adult] 2011), others are more into expanding their labour opportunities in mining and tourism thus believing that external negotiations and associated outcomes are currently on the right track (Indigenous leader 1 [Male, middle-aged adult] 2011). In short, middle-aged adults that are dedicated to agriculture agree with *ancianos*, arguing that their conditions are extremely poor as a consequence of water scarcity and air pollution: “Some State institutions such as SAG (Agricultural and Livestock Service), INDAP (Institute of Agricultural Development) support agriculture [with] loans. But what they plant is only to pay the loan. So they have unprofitable utilities (...). Water is contaminated as crops don’t have the same performance as ten years ago, as fifteen” (Indigenous leader 9 [Male, middle-aged adult] 2012). In this sense, benefits from State authorities are not remotely sufficient to compensate them for their losses, even as external negotiations with large corporations have not yet even begun to offset their difficulties. Worse, CONADI (National Corporation for Indigenous Development) – under the control of the Ministry of Social Development – has recently reoriented their funds, as they insist that most applications to them these days are to support tourism projects that middle-aged adults and the young generation of the community are more interested in implementing: “We did a comparison of the type of the projects that we have, productive projects, and we realised that agricultural and livestock projects are not in the first line. They are not [leading] in either quantity or resources” (Regional authority 1, 2012).

Therefore it is possible to see unequal power relations *within* this age group, mainly because it is those middle-aged adults who are not directly linked with agriculture who are in charge. Although some members of the board are dedicated to agriculture, they have not shown an interest in its sustainability when dealing with external actors. In contrast, they are open to new activities such as mining, with the argument that they need better economic conditions to help new generations: “My idea is to have an industrial school with

careers oriented toward mining” (Indigenous leader 1 [Male, middle-aged adult] 2011). Therefore, they say, negotiations should be related to having access to better economic opportunities to guarantee education for the younger generation: “Most of us work because we have kids and we want them to reach a better education, so we can have lawyers (...) doctors within the community, engineers” (Indigenous representative 8 [Male, middle-aged adult] 2012). In this regard, middle-aged adults that are leading the community are a privileged group, as most of them have obtained either jobs or projects from the mining companies, while some middle-aged adults oriented to agriculture and *ancianos* have been relegated to a secondary place with few or no benefits. As an *anciano* leader argues, most members of this age group are obsessed with having access to new jobs but that does not mean that they have to leave their land: “They are in an age that they can find a job outside but also to work hard in agriculture. I recommend to be trained and to do both things (...) [to work] part time in a company and not to neglect the land (...) because a kid (...) may be interested in working the land later” (Indigenous leader 6 [Male, *ancianos*] 2012).

Yet, governing *middle-aged adults* have not heeded this advice. To the contrary, as this age group has defined priorities in terms of expanding possibilities for the new generations, they have seemingly almost ‘forgotten’ the difficult situation that water scarcity has generating, especially for *ancianos* (Indigenous leader 6 [Male, *ancianos*], 2012). Indeed, benefits from external negotiations have been oriented in two ways, helping mainly the younger generation and middle-aged adults that have little or no relationship with the land. Firstly, most of the initiatives have been oriented toward improving the village infrastructure, such as restaurants and tourist attractions, in order to improve communitarian welfare and to maintain the population of the village. Secondly, these initiatives have been focused on opening up new working possibilities with the idea that the younger generation will stay in the community if they have a proper job *beyond* agriculture: “Youth logic as far as I see, is that if I have a job I will come to live in Chiu-Chiu. If they had the possibility to work in ‘El Abra’ they would live the whole year in Chiu-Chiu because it is nearby and they want to be here” (Indigenous leader 1 [Male, middle-aged adult] 2011). However, this contrasts with the views of some *ancianos*, as they consider that some middle-aged adults are pushing the younger generation to increase their income and fulfil their material and individualistic expectations, sometimes thereby ignoring the fact that the younger generation also need the transmission of cultural values

and heritage and not simply economic opportunities: “[If I had to give a message to the young], it is to transmit respect to all. To not lose the respect” (Indigenous representative 6 [Female, *ancianos*] 2012).

Hence, although this age group leads external negotiations, and thereby shapes the sorts of community outcomes that occur, it is riven itself by inequalities in the distribution of benefits that relate to these outcomes. This has to do with the fact that the middle-aged adults who belong to the community board are for the most part not oriented toward agriculture, and have promoted initiatives addressing infrastructure and labour opportunities, relegating middle-aged adults dedicated agriculture to a secondary role, following the trend of the *ancianos*.

7.1.3 The younger generation: Increasing benefits and possibilities

The younger generation is the age group that would seem to have benefited the most from external negotiations, since they are at a turning point in the direction of their lives. While *ancianos* seem to be more focused on how to cement their relationship with the territory and ancestral practices, most middle-aged adults are systematically promoting new working opportunities to help them improve their economic welfare. Although both groups have different ideas about how to protect the community in the future, they both believe that the younger generation is the age group with responsibility for providing sustainability to the village. This is mainly because other communities of the Loa River have been suffering from youth migration, affecting their future: “[population] has been declining over the last 10 years (...) because only *ancianos* are staying and the young are coming to the city, and that has generated a transition of power” (Municipal authority 1, 2012). In this sense, the younger generation has become the most valuable group, and therefore many of the outcomes of external negotiations are oriented towards them.

As such, the younger generation are the focal point of overall community aspirations, despite the many instances of divisions described in this work. As mentioned, middle-aged adults have been pushing them with the aim of searching for new educational and labour possibilities beyond the village (Indigenous leader 4 [Male, middle-aged adult] 2012). Young residents have started to follow the middle-aged adults’ advice and to search for opportunities outside the village: “There are a lot of young members who are searching for

jobs outside the village and (...) some of them are already working” (Indigenous representative 4 [Male, younger generation] 2012). Some members of this age group note that the *younger generation* are spend more time in Calama and to travel to the village only on weekends and holidays: “Youth used to study up to (...) secondary school and then return to plant, they were the few ones that stayed working, that stayed in the city, now they don’t do that” (Indigenous representative 4 [Male, younger generation] 2012). This situation has confirmed that young members of the community are open to working in mining companies, and therefore labour opportunities for the younger generation have started to be the currency of negotiations with the mining companies.

This openness to new productive activities that is commonly heard from the middle-aged adult board members has also spread to some of the *ancianos*, as they realise that agriculture has almost irrevocably lost its preponderance in external negotiations. Thus, the idea of centring communitarian traditions in agriculture has not been able to prevail over the wage opportunities that mining companies and even tourism may offer; therefore external negotiations have been oriented toward those areas. Indeed, some members of the younger generation argue that even *ancianos* have started to promote youth participation in other productive activities such as mining, although they feel sorry about the decline of agriculture. This situation has scaled up to both the regional and national level. Indeed, it is possible to see a general trend towards a decrease in the availability of water resources for agriculture, and an increase in the demand for water resources by the mining sector, especially between the Region of Antofagasta and the Metropolitan Region (where Santiago is located; an area representing nearly half of the country in terms of space and more than half of it in terms of population) (Ministry of Agriculture, 2010) This can be seen in the comments of one youth: “Even *ancianos* have been encouraging them to migrate to find new labour opportunities, as they have seen how agriculture (...) is not profitable” (Indigenous representative 4 [Male, younger generation] 2012). This is because land has greatly increased ing value, while access to new water rights has become extremely difficult. In addition, the arrival of the Aymara and their openness to new technologies of irrigation and planting has also reduced the impact that *ancianos* of the community used to have even in the agricultural sector. According to another youth interviewed, *ancianos* lost power as the Aymara moved in: “If you see the Aymara [he or she] is the one that is moving agriculture in Chiu-Chiu. The Atacameño [working on

agriculture are] (...) two or three [and hence less important]" (Indigenous leader 11 [Male, younger generation] 2012).

Despite this trend, there are members of the *younger generation* who resist leaving agriculture and do not agree with the economic shift that external negotiations are prompting. Thus, those who still have the conditions (*i.e.* land and water) to plant and dedicate themselves to agriculture believe that external pressure is not allowing them to see things as they wish (Indigenous representative 1 [Male, younger generation] 2011). Indeed, they agree that the grandchildren that inherited land and water from their families are more open to further develop this activity given the right circumstances, as they belong to a higher social class *within* the community. This is the case with a young member of the community who is dedicated to livestock, although it is an activity that is dying out in the village: "[I have land and water] because of my grandfather. He said that he irrigated all the area. All my land has water rights. Others have half an acre of water, or one acre" (Indigenous representative 1 [Male, younger generation] 2011). Youth such as this believe that external negotiations mainly oriented to increasing income and improving conditions for the younger generation in new economic sectors have affected the mentality of other young members, who sometimes are not prepared to handle jobs outside the village, as they are suckered by the money offered: "All of them are dreaming of (...) obtaining money to buy a truck" (Indigenous representative 1 [Male, younger generation] 2011).

While some members of the younger generation decry the processes of co-optation that have started to be more common in the village, others embrace it. The fact that the community is running out of water for both domestic and productive uses, and that agriculture is being affected because of Codelco's air pollution, means that developing other activities appears to be a better possibility. In this sense, mining appears to be more profitable than tourism, as the latter requires a larger investment (Indigenous representative 1 [Male, younger generation] 2011). In view of this situation, the type of negotiations that mining companies such as Codelco are promoting have shifted, focusing especially on the younger generation as they are considered the ones that will decide which path the community will follow (see Chapter 6). For instance, benefits from external actors have started to focus on promoting education and labour opportunities within and beyond the community to satisfy the lack of opportunities that middle-aged adults are highlighting, for example, the trainee programme developed by Codelco. Also, these

external actors have begun to support cultural activities that do not need to consider water shortage in the discussions, such as art initiatives (e.g. creation of the Inca Colla), thereby trying to bypass those still in agriculture – many *ancianos*, some middle-aged adults and even a few members of the younger generation – and their water-related claims.

The *younger generation* has seemingly benefited the most from the community outcomes linked to external negotiations, albeit not those still linked to agriculture. However, being the group who receives external benefits in this way has not necessarily guaranteed their success in other activities such as tourism and mining.

7.2 UNEQUAL DISTRIBUTION OF EXTERNAL OUTCOMES: GENDER RELATIONS

In assessing how community outcomes linked to external negotiations manifest uneven costs and benefits inside the community, the issue of gender also needs to be considered. Therefore, the importance of knowing to what extent, and in what ways gender constitutes an element of internal differences when analysing IGDs is important for this research. Thus, the way gender dynamics may reflect and reinforce these distributions in different age groups is crucial for a deeper understanding of how external benefits are distributed, as gender inequalities are commonly seen. In Chiu-Chiu this has to do with the fact that in this community women do not participate in community decisions, as they are not part of the community board. In addition, they have a difficult position in the village in general, mainly because they have to complement domestic activities with formal work. Indeed, some of them are heads of the household. Some women even have two jobs, combining agriculture with other activities to guarantee education and sustenance for their families: “There are few that are dedicated to agriculture because it is too hard (...) I have to do it by obligation because there is no one at home, I live with my mom so I have to do it” (Indigenous leader 5 [Female, middle-aged adult] 2012).

The marginal role that women in general have had within the community has also affected the potential benefits that they receive from external negotiations. It can be seen that women play an important role in relevant issues such as the transmission of identity and culture, to form new generations with communitarian values, and also in complementing work done by men. However, this group is not especially recognised in external negotiations with large corporations and State authorities. Indeed, most of them have been

relegated to an inferior position, because men have been in charge of deciding the community priorities and therefore the main activities of the negotiations. The present section will thus analyse, through IGDs, to what extent gender constitutes another dimension of unequal distribution of external outcomes.

7.2.1 Older Women: Transmission of culture and identity

Older women have multiple roles in Chiu-Chiu. Nowadays it is possible to see women of this age group oriented to different activities such as agriculture, farming, running catering stores and crafts, thereby showing adaptation to the changes that the community has seen in recent years (see Photo 7.3). As one older woman says, they have seen how other generations have migrated to the cities searching for new opportunities while they have stayed in the village: “The old are here and of course we feel sorry that our sons and grandsons that have to go” (Indigenous leader 3 [Female, *ancianos*] 2012). So *ancianos* in general, and especially women, have stayed in the community despite the difficulties they have faced in terms of a lack of opportunities, and the inequality of external benefits as the board of the community does not represent them: “The board decides what to do. The [board of the] community says yes or no, and to do this instead of that, and here we are” (Indigenous leader 3 [Female, *ancianos*] 2012). In this sense, the older women assume that their claims are not a first priority, and therefore they have no choice but to promote more opportunities for other generations.

Photo 7.3. Women working in El Abra laundry



Source: El America, 2010

Hence, these women often have to put up with double work shifts and other responsibilities without being considered in the negotiation and decision-making processes that affect all community members. True, some women have demonstrated leadership, but such roles are invariably in weaker community organisations. For example, they work in organisations such as the Neighbourhood Council and the Artisan Association, which do not have the same prestige and influence as the Indigenous Community of Chiu-Chiu, which is the organisation in charge of external negotiations (Indigenous representative 6 [Female, *ancianos*] 2012). However, some of them have started to quit even these organisations, as they feel that they have started to forget the ancestral practices, as purportedly happened in the Artisan Association: “They bought Bolivian and Peruvian things, as you can see, and I didn’t like that” (Indigenous representative 5 [Female, *ancianos*] 2012). Therefore, the older women have started to withdraw their participation and look for other opportunities, such as the ‘Murtra’, a retreat centre located in the village of Chiu-Chiu that opened new places for older women, for example craft courses. Indeed, this place, organised by a foreigner, has become a meeting place for women (especially *ancianos*) that are not involved in the decision-making of the community board.

However, this withdrawal has only weakened further their capacity to generate change in the community. Not surprisingly, traditional patriarchal relations persist as women support and complement the role of men: “Woman is like the right hand, is like one of the pillars of the family. Both of them work. For instance now, the man goes early to work and the woman stays cooking and then goes to the paddock to help him. She returns early to finish the lunch and all [house activities]” (Indigenous representative 7 [Male, *ancianos*] 2012). Some older men in the community assume that women will also work in agriculture, but much less than the men, as they have domestic activities as well: “[Women] don’t work the same as [men in agriculture]. You know that women have to work in the kitchen, to clean the clothes” (Indigenous representative 2 [Male, *ancianos*] 2012). In this sense, men recognise the lack of community participation that women have had, but argue that they have always given space for them. This can be seen in the testimony of a former president of the community: “I don’t know why they don’t participate, but when I was president (...) I worked with the Neighbourhood Council, and the president was a woman” (Indigenous leader 10 [Male, *ancianos*] 2012).

Still, some external actors specifically acknowledge the importance of older women in the village, notably in terms of the transmission of cultural identity (Civil Society 8, 2012). They believe that the internal problems the community is facing are related to the lack of leadership that men have shown: “We are missing people that could summon the will of the community and where it should go, but I don’t see it in these leaders. Sometimes I feel, no, I am sure that women would be much better leaders than men, they would do a better job” (Civil Society 7, 2012). Some in local government feel likewise: “We are working to understand the role of women (...) as they have an important role in ceremonies” (Municipal authority 7, 2012). In addition, they also promote the participation that the older women have in cultural and tourist street markets in Calama. For instance, the ‘Biodiversity Fair’ has become an occasion where women promote the village’s culture within the region with special dishes, fabrics and handicrafts (Municipal authority 2, 2012).

Some older male members of the community do not share this view, however. They believe women have to be ‘two steps behind’ men, in case their participation is needed: “If she has to irrigate (...) if she has to pick vegetables, to harvest, women are in charge” (Indigenous representative 7 [Male, *ancianos*] 2012). Meanwhile, as men develop negotiations with external actors, their participation is ‘not required.’ Therefore, they are relegated to communitarian spaces that are ‘less important’ and that are not of interest to men, affecting their capacity to influence decision-making and hence to promote specific claims of interest to them. In addition, internal problems that some *ancianos* and some middle-aged adults have had in terms of leadership and management have also affected older women’s participation, as they feel left out of such a critical debate. These women are sceptical of the resulting trend in which money has become the main target: “What happens nowadays in (...) some villages (...) is that [negotiations are] very messy, they are interested in money so they don’t see [what is relevant]” (Indigenous representative 5 [Female, *ancianos*] 2012).

Thus, although older women play an important role in cultural and agricultural terms, they are allocated to a marginal role that is based on complementing men’s activities when dealing with other topics/activities. They are the ‘weakest of the weak’ in Chiu-Chiu – and community outcomes of eternal negotiations, more often than not, reflect this situation.

7.2.2 Middle-aged adult women: Heads of households, work and exclusion

The middle-aged adult women of the community also play multiple roles within the community. Even though this age group shares some of the life patterns with older women such as double shifts, the fact that some of them are also head of household has forced them to participate more within the community. In this regard, they are in a better position than the older women, but still in a situation of relative exclusion. As men in the community have said, middle-aged adult women have earned respect within the community as they have had to assume a productive leadership role due to the absence of some men, who have migrated to find work: “Women are working in the fields, as I tell you, some of them are mothers, heads of household (...) [therefore] the needs are clear for them” (Indigenous leader 1 [Male, middle-aged adult] 2011). One can see recognition from men of this age group because they see that women have been able to fill the role that men used to have in terms of local economic livelihood, avoiding the use of words like ‘complement’ and ‘help’ that are commonly used by the *ancianos*’ age group: “I have to do it [work in agriculture] for obligation, because there is nobody else at home. I live with my mother only so I have to do it” (Indigenous leader 5 [Female, middle-aged adult] 2012).

Although these women are still excluded from decision-making, some of them have nonetheless started to lead initiatives that are very relevant to the entire community, even if it does not lead to appropriate community benefits coming to them. Although middle-aged adult women still do not participate in the board of the Indigenous Community of Chiu-Chiu, some of them have acquired a special role on issues such as water and land management: “Now we have in fact a lady, I mean a woman, that is in charge of the representation of the table of water (...) as she is a person really involved in the water issue” (Indigenous leader 1 [Male, middle-aged adult] 2011). In this sense, middle-aged adult women have a similar role in terms of management to the one that older women have in culturally productive terms, which is basically a secondary role that is incorporated within the official organisation only when it is necessary: “Before [organisations] were generally led by men, and women were secretaries or treasurers but never presidents” (Indigenous leader 5 [Female, middle-aged adult] 2012). Although some middle-aged adult women appear to have a more prominent role than the older women, they still have an unequal role within the community and therefore usually obtain fewer benefits from external negotiations. As an middle-aged adult woman stated: “I would negotiate in a

different way, asking for more (...) I see how we really do our best (...) but it is really hard” (Indigenous leader 2 [Female, middle-aged adults] 2011).

Photo 7.4 Community Laundry



Source: El America, 2010

Still, change for these women is real with some benefits at least coming their way. The new status that middle-aged adult women have achieved can be seen in their role in the ‘Community Laundry’. As mentioned before (see Chapter 6) ‘El Abra’ Mining set up a laundry in the village of Chiu-Chiu with the aim of giving employment and progress to the community (see Photo 7.4). This initiative, started in 2007, currently employs 24 women of the community and has been the basis of their family support. As a woman said in an official interview a couple of years ago: “This is very important for us, because there is a family behind us and we cannot depend only on agriculture and this activity reconciled our work with our crops” (El America, 2010:1). Thus, the strategic alliance that the Indigenous Community of Chiu-Chiu made with El Abra Mining here has become a model for successful external negotiations, as it has given new possibilities to residents (even some *ancianos*) to improve their economic conditions. However, this initiative has generated problems within the community, as it depends on the goodwill of the company and requires technical administrative knowledge. Some have argued that this company took advantage of the acute labour needs of the village, delaying contract signing.³⁶ “The laundry is communitarian (...) and we have had meetings, we are in service but to sign the contract

³⁶ The Indigenous Community of Chiu-Chiu has an agreement with ‘Minera El Abra’ that started in 2010. As a part of this agreement the community provides cleaning services to this company (El America, 2010).

they processed us for one year and eight months. We have a fight with them” (Indigenous leader 1 [Male, middle-aged adult] 2012).

Whatever the difficulties, middle-aged adult women have been the main beneficiaries here. Although the laundry employs women of different age groups, it has been the most prominently represented and hence has acquired an elevated status in the community. It has certainly highlighted to everyone, including the men, how central women are to family wellbeing in Chiu-Chiu: “Women work the same as men on the land. The laundry is full of women, mainly single mothers. So they work there, and in their free days they go to (work with) carrots. They work 7 x 7 in the Laundry and the other 7 days as heads of household on the land. Women are hard working here” (Indigenous leader 1 [Male, middle-aged adult] 2012). Indeed, middle-aged adult women have started to have much more autonomy than older women ever had in terms of income and household administration, and therefore they have directly benefited from external negotiations in this regard. As an middle-aged adult woman states, working in the laundry has increased their quality of life and dignity “[Working in the laundry], makes us look better as persons (...) we are no longer indigents (...) I told other ladies that we have to be proud” (Indigenous leader 5 [Female, middle-aged adult] 2012). However, to reach that goal this age group was pushed to take on even more work than the older women had, mainly because they now complement agriculture with other jobs (such as the laundry), and also with domestic activities they have at home.

However promising these changes might be, this age group still does not have a role in the main community decision-making. Thus, when analysing the way that the Indigenous Community of Chiu-Chiu negotiates with external actors, it can be seen how women of this age group still have a secondary role. For example, men manage the laundry, which is mainly composed of women, as it belongs to the community. Women here have the opportunity to work, but not to participate in the external negotiations that the Indigenous Community of Chiu-Chiu has with El Abra Mining, as it is assumed that they do not know about labour conditions and official agreements: “We don’t know about labour laws, we have never received a bonus, we work more, we produce more (...) I think that it is good to ask, because we have never worked and girls that started working didn’t know about the work, they had never received a salary” (Indigenous leader 5 [Female, middle-aged adult] 2012). There is a clear situation of disadvantage for the women, as they don’t participate in

external negotiations and therefore have to accept the conditions previously arranged by men, excluding them from the decisions relevant to their daily lives.

Thus, middle-aged adult women have altered the role that local women have in the community, hitherto only seen in terms of cultural and heritage transmission, and have started to validate themselves as an effective workforce. However, their lack of technical capacity and inexperience in the economic arena has weakened their participation and access to benefits of external negotiations.

7.2.3 Young women: economic opportunities in a sexist community

The young women of the community appear to have a better position than women of other age groups in that the younger generation in general are primary beneficiaries of external negotiations. They are better recognised than before, as they usually share roles with men. The young men do not consider themselves to be sexist, arguing that women do not have a secondary role: “I don’t think (we are sexist) as there are several women working in agriculture. When one is sexist you have to be like that in all ways” (Indigenous representative 4 [Male, younger generation] 2012). Women that belong to this age group have started to feel a sense of recognition at least within their age group, as they are seen to share both domestic and productive functions. Therefore, the role of women has started to be more fully recognised than before, as they have started to share in potential initiatives that the Indigenous Community of Chiu-Chiu negotiates with external actors. Younger generation opportunities are the main goal for both middle-aged adults and *ancianos*, as a middle-aged adult leader states: “I transmit from my experience carrying the young, teaching them, preparing people” (Indigenous leader 8 [Male, middle-aged adult] 2012).

Yet, although it can be said that young women (along with young men) have become direct beneficiaries of external negotiations, this still does not mean that they are part of the community decision-making process. The fact that the male middle-aged adults and some male *ancianos* are the key actors that lead these negotiations suggests that young women are at a disadvantage in comparison with young men, as such negotiations follow a traditional understanding of the productive role of men. Nevertheless, the inequalities that women in this age group still face (following the pattern of the other age groups) have

generated in certain external actors the need to develop specific initiatives to improve young women's participation. Indeed, the Municipality of Calama is promoting initiatives especially designed for women: "There are new areas [of support] through start-up business loans for women and enterprises, social ventures...that's our role" (Municipal authority 1, 2012). Therefore, women have started to receive new opportunities from actors outside the community, demonstrating that they can be active actors themselves. This can be seen in the case of a young woman from the community working who works for Codelco: "I have a [young woman] (...)here doing professional work in environmental issues, a young [woman] that just finished university" (Large Corporation 2, 2012).

Still, such new opportunities, when they occur, have not succeeded in offsetting the traditional double work shifts often imposed on women or the lack of participation in community decision-making. As one middle-age adult resident said, several young women are heads of households and therefore have followed the same path as the middle-aged adult women. However, some members of this age group believe that agriculture is not an option and therefore they believe that life could be better in an urban centre such as Calama: "Young girls see that it has many sacrifices so they say no, I don't like it, I don't plant, because they have another [idea of life], they say no, I would like to raise money and apply for a house in Calama" (Indigenous leader 5 [Female, middle-aged adult] 2012). Although the tendency to work in dual roles or to complement their jobs with agriculture is still common for some young women, the aim of this activity is totally different among different age groups. The young do not see the end point of their development as middle-aged adults do, and are willing to live elsewhere if economic conditions are better. Thus, they are open to start working in mining companies (Indigenous representative 9 [Female, younger generation] 2012).

Young women thus have a unique role in the community that often makes them detached from the negotiations of the community. While women of other age groups are willing to improve the conditions of the village in terms of economic opportunities and better infrastructure, these young women are pushing to be recognised as a 'working force' that is able to do activities that were typically reserved for men (Indigenous representative 9 [Female, younger generation] 2012). Unlike men, who have higher requirements in terms of salaries, young women are more focused on expanding new possibilities especially considering that agriculture and mining are activities generally developed by men. In this

regard, *ancianos* in the community have started to identify increasing potential in this age group. As with young men, *ancianos* have recognised in young women important skills to transmit and expand the community's heritage. Therefore, they have started to include both women and men from this age group in community activities, bestowing on them a higher social status than women of other generations: "You cannot take knowledge to other places, it must be useful for the youth (...) I want to educate the young, I want to leave nephews and nieces" (Indigenous leader 6 [Male, *ancianos*] 2012). In this regard, young women have begun to be considered as an important tool to give sustainability to the community in terms of cultural practices such as crafts. However, the older women of the community are concerned about the priorities that the young women have, as they have been encouraged to base their activities on getting a good job: "Now people think differently, they say that they don't care about agriculture, that water is a problem of the past, that they are worried only about having a job" (Indigenous representative 5 [Female, *ancianos*] 2012).

On the whole, young women have shifted the circumstances faced by women of other generations over recent years, as they have started to become actors that go beyond the limits that *ancianos* and middle-aged adults of the community established in other generations. Therefore, young women have become actors who are not only important in terms of capacities and knowledge (especially as some women hold professional degrees), but also in terms of their potential to pass on the cultural roots of the community.

7.3 RESISTANCE TO COMMUNITY INEQUALITIES

This chapter has so far explored a number of ways that unequal outcomes have shaped life in Chiu-Chiu across age and gender categories. But to what extent and in what ways resistance to such outcomes occurs will be considered next, including how it is related to IGDs. This section thus analyses how IGDs have contributed to creating a local narrative regarding water that reinforces communitarian claims with input from all generations: ancestral declarations (*ancianos*), legal rights and duties (middle-aged adults), and new cultural tools (the younger generation). Therefore, this narrative has reinforced a local idea of development that could allow them to yet resist external actors' arguments, especially those of Codelco, in a context of inequitable community outcomes.

7.3.1 Water as the right to choose

For *ancianos*, as this research has shown, water is important in both cultural and productive terms. Thus, there is a special link with water basically because most of them are dependent on agriculture, considered by them to be the main activity of the village. Yet this relationship goes beyond agriculture in that there is the idea that without water the sustainability of the community ‘hangs in the balance’. Not surprisingly, then, the resistance that they show regarding external outcomes is focused on the way that water overuse by large corporations, especially Codelco, is limiting the possibilities for new generations to decide what they want to do, as occurred in other communities such as Estación San Pedro (see Photo 7.5): “Imagine the San Pedro river was a trickle but it had life, animals, trout (...) now it is only dust (...) and people have to migrate because there was no water” (Indigenous representative 6 [Male, *ancianos*] 2012). Thus, despite the dependence that this age group has on agriculture, their dynamics of resistance have deeper roots that are related to the possibilities that future generations will have in terms of enjoying the village as they were able to (i.e. the cultural fabric of Chiu-Chiu).

Photo 7.5. Community of Estación San Pedro



Source: Author. February 2012

While the younger generation are the age group that has been relatively favoured by the recent distribution of external benefits, *ancianos* have problems dealing with those benefits as they see how long-term village sustainability is thereby put at risk, as companies are able to side-step bigger obligations. Here, older residents are reluctant to accept how the

application of the Water Code and the associated overuse of water by Codelco has undermined the younger generation's capacity to choose their own productive future, as entire villages have dried up: "So, villages are going to disappear (...) what is the future of them? Are youth returning to villages? No, and Codelco has not invested money in that" (Indigenous leader 10 [Male, *ancianos*] 2012). Therefore members of this group have resisted the way that big corporations and State authorities have tried to instil in the village the idea that the quality of the Loa River's water is better suited for industrial purposes, in order to try and develop new projects in the area, regardless of the fact that prior to mining in the region, the community of Chiu-Chiu (as well as other Atacameño communities) used to drink water directly from the river: "I was born drinking water from the Loa River, until I was seven I drank water from the river, and I am not sick, so it was not industrial water" (Indigenous leader 10 [Male, *ancianos*] 2012).

The way this age group opposes such water inequalities does not relate only to agriculture, although this too is crucial for their welfare as was mentioned in Chapter 5. For them, this activity (and rearing livestock too) symbolises something much bigger, namely that the community is alive and that water is the reason for this: "Water is life (...) without water we are nothing (...) that life is given by water, that they are vegetables, typical food" (Indigenous leader 6 [Male, *ancianos*] 2012). Therefore, this group's strong dependence on agriculture, as their traditional activity, is not the main reason for their claims, they say. Indeed, they use their agricultural background to demonstrate how external actors have moved negotiations towards developing community activities that permanently require less water, thereby all but accepting that the decrease in water availability will never change. In addition, members of this age group insist that external negotiations' outcomes do not consider the fact that the younger generation and middle-aged adults of the community have been forced to work in low-skilled jobs in Calama, as they do not have access to water and land in the village: "They don't have other alternatives, they don't have, for instance in Calama they have to go to a bad job, and most of the time are discriminated against for belonging to [this] town" (Indigenous representative 3 [Male, *ancianos*] 2012).

In general, *ancianos* thus place water issues as central to how resistance should be manifested in future external negotiations, based on water being a symbol of their right to choose how to live life in Chiu-Chiu. Although external pressure over water resources has increased in the last few decades, pushing members of the community to reorient their

claims and struggles (especially middle-aged adults), there is recognition of the vitality of water that spans the different age groups. Therefore, some *ancianos* invite others who have been seduced by individual negotiations regarding water to also think about the consequences this may cause for the capacity of the new generations to choose for themselves: “[Don’t] neglect the land, and think less about selling it, because maybe a child or a grandchild could be attracted by the land, and could want to go back to the land” (Indigenous leader 6 [Male, *ancianos*] 2012). In addition, they have tried to redefine community negotiations to think more about the medium and long term and not just short-term issues such as money for specific projects, infrastructure and/or equipment, basically because the damage that the large corporations have caused in villages cannot be reduced to a couple of ‘Competitive Funds’ such as the ones that Codelco has promoted over the last few years: “[For instance] some members of the community accept [Codelco’s electric initiatives] because they are not informed (...) Codelco acts with a double standard (...) and they just know who are the weak people” (Indigenous leader 6 [Male, *ancianos*] 2012).

On the whole, although external actors and even internal actors have argued that the *ancianos*’ resistance is running out of time, considering the entrenchment of large corporations in the area, as this generation inevitably dies out, the *ancianos*’ way of resistance finds, in other age groups, a common thread that gives sustainability to this sort of discourse within the community. In effect, the main element of resistance is based around water, as it is an essential right that to them must be central to these external negotiations.

7.3.2 The right to return: resistance of middle-aged adults

The relationship that most middle-aged adults of the community have with water is different from the one that *ancianos* have with it. As was mentioned in Chapter 5, they have a more opportunistic vision of natural resources, as it constitutes a ‘bargaining chip’ especially relevant to large corporations in the mining sector. However, they also believe that water is an essential claim that the community should pursue mainly because it increases the possibilities that the village has to grow and increase its quality of life. Consequently, members of this age group are aware that the water deficit that the village is experiencing has limited its development, and therefore, their resistance should consider

the utilisation of all legal possibilities under the Indigenous Law to recover water rights lost during the 1980s: “We are not talking about a deficit of water that does not correspond to us because it has to do with the fraud or theft that was done to the people here. Therefore, we arrived at an estimated amount of 120 acres of deficit” (Indigenous leader 1 [Male, middle-aged adult] 2011). Overall, this age group believes that water is relevant as a symbol of growth and expansion, especially considering that Chiu-Chiu is the only village in the Loa Province that is increasing in population.

In this regard, the position middle-aged adults take towards water rests on the fact that the community is the owner of water rights, as well as the mining companies and State authorities. Thus, the main argument starts with the rights that they have as owners of the Loa River. They therefore seek the respect of external actors when using water rights upstream of the village, in terms of both quantity and quality, as their water management directly affects local communities that use the river’s services downstream. One example is the consequences of ESSAN’s (Sanitary Services Company of Antofagasta) use of water from the Loa river (upstream from the village of Chiu-Chiu) and its effect on the supply of domestic water to the cities of Antofagasta, Calama, Tocopilla and Mejillones: “ESSAN has water rights for 500 litres per second and they assure the 500 litres per second, but they forget that they have to leave an ecologic flow, they forget that there are people living downstream that are also owners of the water, they forget about farmers” (Indigenous leader 8 [Male, middle-aged adults] 2012). Consequently, members of this group are fighting not necessarily about the ancestral ownership of water, as *ancianos* have, but against these very specific and tangible problems, arguing that the communities are always the most affected: “If there is a rationing of water it should be for all of us and not just for some” (Indigenous leader 8 [Male, middle-aged adult] 2012). So they base their arguments on a pragmatic and contemporary sense of (in)justice based on multiple water users and rights.

This situation reveals how middle-aged adults mount their resistance to external actors, using the legal argument that all members of any community have the right to access to clean water. So although the external negotiations led by this group over the last few years have been oriented towards equipment and infrastructure for the village, they have always also been linked to CONADI, with the aim of recovering water rights that used to belong to the community (Indigenous leader 8 [Male, middle-aged adult] 2012). However, this

institution, well regarded by some middle-aged adults, has not facilitated rapid process for the recovery of those rights, showing little effectiveness in this area: “Chiu-Chiu lost a lot because they didn’t have direct funding (...) CONADI has been a bureaucratic entity (...) If you want to send a document or something related to water it has to go through CONADI for signature, sometimes it spends weeks, months” (Indigenous representative 8 [Male, middle-aged adult] 2012). Therefore, the legal procedures through which that this age group has chosen to try to activate the purchase of water rights has not delivered the expected results, generating further differences between middle-aged adults and other age groups, especially the *ancianos*.

Consequently, the importance of water for this age group can be seen in their rejection of Codelco’s analysis on the quality of the Loa River. In this sense, they agree with *ancianos* in arguing that the problem facing the village is not only the quantity of water, but also about its quality, as the mining companies have affected the potential development of agricultural activities, by decreasing the land’s capacity: “[The land] is not giving and water is not good (...) Codelco sent environmental studies to see how [bad] is the contamination but we don’t know that [confidential] information, and we will never know” (Indigenous leader 9 [Male, middle-aged adults] 2012). Here Codelco remains highly secretive. The message for future generations has always been related to utilising the opportunities that the Indigenous Law and external actors give them in terms of education and labour, but not forgetting that the community requires new generations to return to the village, and therefore it has to offer at least minimal amenities in terms of water security and basic infrastructure (Municipal authority 1, 2012). Also, there are young members of the community who prefer to work in agriculture instead of working in other cities such as Calama: “[Some members of the community] have returned because agriculture does not give too much money but it’s secure (...) They have returned because they say that they are used to being more free (...) to work with a boss is different” (Indigenous leader 5 [Female, middle-aged adult] 2012). This situation can also be seen in the case of the women who have shown more openness to the possibility of living in urban areas, as even they plan to return to the village.

In short, middle-aged adults have not focused their external negotiations with large corporations specifically on water issues, as they have assumed that CONADI will respond to their demands in regards to water and land. Indeed, they have been leading external

negotiations beyond the pursuit of economic welfare, as *ancianos* assumed, and in this respect they have entrusted external negotiations to the legal avenues they have at their disposal, despite such a path proving ineffectual to-date.

7.3 The right to rebuild: resistance of the younger generation

Finally, the younger generation has a relationship with water that rests mainly on the symbolic importance it has had in the village. Although many of them have a more detached relationship to water in productive terms (compared with middle-aged adults and *ancianos* especially), they still show an important connection to this resource in cultural terms. Indeed, ceremonies and community festivities such as the ‘channel cleaning’ have been rebuilt by this age group, always maintaining water as the main element of commemoration and recognition: “[Communitarian activity] brings together the young. In the summer, all of them come together [to Chiu-Chiu] (Indigenous leader 10 [Male, *ancianos*] 2012). This age group believe that the community needs to base their resistance around rebuilding a relationship with water beyond the Water Code of 1981, which has only brought pain and stress. This can be seen in the testimony of one young person who suffered inconvenience because he had water that was legally registered by his grandfather: “They bother me because of water. The entire village. Nobody has water” (Indigenous representative 1 [Male, younger generation] 2011). Therefore, some members of this age group have started to promote activities that combine the ancestral relationship *ancianos* had with the community and the legal rights this community has under the Indigenous Law of 1993, which middle-aged adults have tried to expand via CONADI.

The younger generation thus acknowledges how external negotiations have generated historical inequalities in the village. On the one hand, the fact that the community has shown a lack of technical knowledge (especially *ancianos*) regarding water rights and water management, has been a good incentive for the young to acquire new knowledge about legal issues, assuming that a lack of knowledge constitutes a disadvantage when dealing with external actors. This is the case with a young resident working in the DOH (Directorate of Hydraulic Works): “I have a concept based on the resource, not so focused on farmers as my parents, more focused on taking care of the rights, and more seen from a public service sphere rather than water users” (Indigenous leader 11 [Male, younger generation] 2012). Such expert knowledge can help underpin community efforts to restore

water rights via better legal arguments. On the other hand, young members of the community have also pushed to revive cultural practices associated with water that were developed by other generations. Although some *ancianos* argue that they have done this only for the purposes of having fun, it is a fact that the younger generation have given vitality to these activities and therefore middle-aged adults have begun to give them new space: “We have group meetings (...) and meetings that are held in the community to make [youth] (...) participate more” (Indigenous representative 8 [Male, middle-aged adult] 2012). Such cultural work is not to be denied.

There are two important practices that show the relevance youth have acquired in resisting inequitable externally imposed outcomes through cultural means. The first practice relates to the musical group Pat Ta Hoiri. As mentioned in Chapter 6, young members have taken part in this group, generating a greater attachment to their culture. Indeed, through music they have understood the importance of water for the sustainability of the village (Hori, 2009), and therefore have reconnected with the idea of territory that both *ancianos* and middle-aged adults have promoted through different optics. The second practice is their participation in the ‘Tripartite Party’ located in ‘Hito Cajón’ that brings together indigenous groups from Chile, Argentina and Bolivia. In these activities there is a mingling between members of different ages and ethnicities who exchange products and develop joint activities to celebrate water, as well as other natural resources: “Now there is a bigger participation of youth (...) as they have shown through media [the activities] in other places” (Indigenous representative 8 [Male, middle-aged adult] 2012). However culturally located, these practices point to a growing resistance to the status quo centred on prevailing water use patterns.

Thus it can be argued that even the younger generation also recognises water to be an element the community cannot live without. Although this group has widely benefited from external negotiations in terms of labour and educational opportunities, they do believe that the conditions community members are facing because of water scarcity and contamination are not fair. Indeed, they have seen how *ancianos* have had to adapt to the new conditions, for example changing their historical production of carrots: “Now there is a disease that entered the land, they don’t know if they are going to harvest or not (...) Even, we are not only producing carrots, but also quinoa, corn, garlic” (Indigenous representative 4 [Male, younger generation] 2012). The younger generation have therefore begun to

review their individual interests, and some of them have even started to search for commonalities between the *ancianos*' and middle-aged adults' arguments regarding water. Although they understand that agriculture is less commercially significant today than other activities such as mining, they have begun to recognise the symbolic significance of this activity, rebuilding the *ancianos*' vision of development in the process: "Of [water] we live, off the water of the river, most people live off that" (Indigenous representative 4 [Male, younger generation] 2012).

The resistance demonstrated by the younger generation aims to re-establish the importance of water on a culturally-mediated agenda, not simply based on just ancestral or legal grounds. They have sought to rebuild resistance to inequitable community outcomes notably by interweaving insights from the *ancianos* about territory, and knowledge about legal tools promoted by the middle-aged adults, in a culturally-based 'package' that simultaneously appeals to a wider natural and perhaps even intellectual audience keen to support indigenous rights.

7.4 SUMMARY

The aim of this chapter has been to assess to what extent IGDs shape the way that the perceived costs and benefits of any outcomes of community negotiations with external actors are distributed within the community. The first section looked at the way IGDs reflect unequal local power relations in the distribution of these outcomes, emphasising the way different age groups have achieved divergent results when dealing with external actors, and how the youth have become the centre of initiatives developed by both large corporations and State authorities. The second section analysed the role of gender as an element that often combines with IGDs to exacerbate differences within the village. Finally, the third section analysed the way in which IGDs may reflect resistance to community inequalities, suggesting how water may be the common link here even if forms of resistance by the *ancianos*, middle-aged adults and the younger generation have yet to bear substantial fruit in terms of restored water rights.

CHAPTER 8. CONCLUSIONS

This thesis has undertaken an examination of how intergenerational dynamics may reflect and/or reinforce different rationalities about local development within the Indigenous Community of Chiu-Chiu when dealing with powerful outsiders. In doing so, the aim has been to contribute to knowledge about the different dynamics present within environmental conflicts between indigenous communities and large corporations, and the manner in which intergenerational dynamics (IGDs) constitute a key factor in cultural differences in terms of development and negotiations. The last three chapters presented and analysed empirical data crucial to the investigation of the main research issues of the thesis. This chapter will conclude by relating the research themes to the findings of the empirical chapters. For this, it will elaborate a final review of the core themes related to the way indigenous communities are often internally differentiated on development matters, focusing on IGDs; the way those dynamics are used by external actors to redefine political negotiations; and the way that perceived costs and benefits are unequally distributed among the community, generating resistance across the generations. Finally the chapter will discuss possible future directions for research emanating from the thesis.

8.1 THESIS FINDINGS

8.1.1 Development ideas and rationalities

This thesis has clearly emphasised that indigenous communities do have internal differences when defining their ideas of local development and how to interact with powerful external actors. As seen in Chapter 4, indigenous communities in Chile have been especially sensitive to the historical processes that the country has suffered over the last 50 years, especially the dictatorship of Pinochet and the return to democracy, as they have redefined their ideas of development. In this sense, a constant negotiation between global and local views of development can be seen, as neoliberal initiatives brought in under the Constitution of 1980 have reinforced the modification of ancestral practices with regard to natural resources. In analysing the application of the 1981 Water Code it can be seen how changes in water management have caused tensions in local relations and generated internal community differences over water, affecting their social cohesion and ancestral property claims. The fact that different age groups have been treated dissimilarly in this process has generated internal differences that can be identified through the lens of

IGDs. For example, while *ancianos* saw how the dictatorship of Augusto Pinochet broke community-based initiatives promoted by the socialist Salvador Allende, the younger generation have grown up under a democratic government that has created special considerations for indigenous peoples, such as the 1993 Indigenous Law. How these basic differences affect their views on the future of Chiu-Chiu is at the heart of this research.

As described in Chapter 5, IGDs were analysed in relation to three age groups defined in terms of the year they came of age (18 years old). The first group, '*ancianos*', is composed of members of the Indigenous Community of Chiu-Chiu who were 59 years or older in 2012, who came of age before the Pinochet dictatorship and the Water Code of 1981. The second group, 'middle-aged adults', are the members of this community between 42 and 58 years old; men and women who came of age during the Pinochet dictatorship and before the Indigenous Law of 1993. Finally the 'younger generation' are those between 18 and 41 years old, who came of age after the return to democracy in 1990, under the 'New Deal' that the democratic government implemented for indigenous groups. The analysis of these age groups shows empirically how both internal differences and agreements regarding development have appeared within this community as a consequence of external pressure from mining companies and State authorities (at the national, regional and local level) in light of the 1981 Water Code. Although this analysis tried to avoid generalizations, using elements of gender, ethnicity (in the case of the Ayamara) and to lesser extent class, it inevitably portrays somewhat homogenous narratives for each group, in that it cannot completely consider all of the varied voices that comprise each group.

Following this line of research, intergenerational dynamics reflect different views on local development in dealings with both Codelco and State authorities. *Ancianos* who have a vision of development based on a socio-natural idea of territory have defined their relations with external actors based on the argument that natural resources are elements that should transcend the individual interests of members of the village. Thus, the Water Code is seen as a countermeasure that goes against the welfare and sustainability of the community, as the lack of water affecting all the generations. For the *ancianos*, local development should be fully linked in with the concept of territory, and the fact that this Code separates water rights from land ownership has inevitably exacerbated their tense

relations with Codelco, as the company has strongly benefited from this Law to the towns detriment.

In dealings with external actors, some *ancianos* require that they respect their productive and cultural traditions with natural resources. Indeed, they have deemed the meaning of 'being an Atacameño' to include a close relationship with the water and land, and, by association, those activities that have a strong dependence on natural resources, such as agriculture and, to a lesser extent, livestock. Thus, members of this age group have adopted a unique position with regard to these traditional activities in terms of both productive and cultural dynamics such as irrigation techniques and land payment ceremonies. They have focused their discourse on the way that mining has diminished water access and land fertility, showing empirically how agricultural production has decreased.

Meanwhile, most middle-aged adults have a different definition of development based on the recognition of indigenous peoples promoted after the return to democracy, with the creation of the Indigenous Law of 1993. Although this age group lived through the era of neoliberal ideas of trade and competitiveness with natural resources under the Water Code during their adolescence, they have reconsidered their indigenous status in terms of the 'rights and duties' defined for them by the State through the Indigenous Law. The new status acquired by the Indigenous Community of Chiu-Chiu under this Law has brought benefits in terms of education, housing and labour. For them, the cultural and productive impacts suffered by *ancianos* in adapting to a new system of water management have been partially compensated for by the protection provided for indigenous people by this law. Funds to recover land and water, and especially investments from local and regional authorities to improve community conditions, have been generally well received by this age group, thereby weakening the impact of *ancianos*.

Thus, for them, the meaning of what it is 'to be an Atacameño' has been altered to what it is 'to be *recognised as* an Atacameño'. To this extent, the identity assumed by middle-aged adults is based on criteria defined by outsiders, specifically the State. And yet, even though the Indigenous Law seeks to give institutional support to indigenous people, it has been unable to resolve the cultural and productive consequences of water scarcity suffered by the village. The neoliberal system of water management has been combined

with democratic processes in form but not substance, through incremental and unplanned changes. In fact, the Water Code, while retaining its neoliberal essence and adopting democratic reforms (*i.e.* payment for the non-use of water rights) and tools such as the Fund of Land and Water to address water scarcity, has offered no real benefits to the indigenous people *per se*. In short, the vulnerability of middle-aged adults arising from the economic instability of the late 1970s and 1980s, with the associated poverty and inequality, was somewhat addressed by the Indigenous Law, which well implemented used by State authorities in order to redefine priorities and claims by this group in a way that has nevertheless left intact inequitable water arrangements.

The schism observed between *ancianos*' and middle-aged adults' notions of development and rationalities has inevitably affected how the younger generation has viewed development. Although this age group endorses the idea of territory at the cultural level, most of them do not see opportunities for themselves working in the village with either agriculture or livestock due to the water scarcity. For them, the neoliberal dynamics of trade and competitiveness have increased water and land prices; therefore tourism and mining have become the more profitable activities. Thus, the younger generation has redefined their ideas of development to go beyond the boundaries of the village. Although some of them live in the community, most of them study and work in urban centres such as Calama and Antofagasta. The *ancianos*' notion of development, demarcated by living and working within the village, has seen a shift in the eyes of both the middle-aged adults and the younger generation. While some middle-aged adults have focused on development through living in the community, but often working elsewhere, some members of the younger generation have decided that visiting the village frequently may be sufficient enough to register their interest and support.

Despite the physical detachment from Chiu-Chiu of many of the youth over the years, they have nonetheless connected with *ancianos* through artistic initiatives. The youth have thus gone beyond the idea of 'recognition as an Atacameño' as defined by the State (underpinning the middle-aged adults' view) and have begun to question what it is 'to feel Atacameño.' In fact, they have seen how national initiatives under democracy, such as the New Deal and the Social Pact for Multiculturalism, have not adequately solved the problem of the historical debt owed by the State to the Indigenous Community of Chiu-Chiu in terms of water and land. As they have become a more educated and informed age group,

they have realised that the 169 ILO (International Labour Organisation) Convention is the international mechanism capable of reinstating recognition of their indigenous rights. In short, they have started to adopt a vision that goes beyond water rights and legal tools, although some of them are still happy with the short-term benefits that they can obtain from both the State and large corporations.

In summary, the meaning of what it is 'to be an Atacameño' has skipped a generation and the younger generation has become the crucial actor in both conserving and expanding indigenous claims. However, they have gone beyond just trying to understand what it means to feel indigenous. Although this age group has revitalised the cultural ideas of development promoted by the *ancianos* in relation to territory, they have distanced themselves from the essentially de facto view of social identity that seeks to exclude both global and local outsiders, as in the case of the Aymara. Unlike *ancianos*, the younger generation has recognised the important role of this ethnic group in the recuperation of the agricultural state of the village, following a trend of integration that started with the middle-aged adults under the Indigenous Law. To this extent, relying on the 169 ILO Convention, as middle-aged adults did with the 1993 Indigenous Law, would still appear to not be sufficient to elaborate culturally appropriate development that recognises communitarian priorities, not only in terms of scholarships or special funds, but also in terms of future decisions and autonomy. The fact that this Convention has so far failed to serve as an effective tool for participation has become a barrier to structural change.

8.1.2 External negotiations

A second area of insight provided by this research is how different views of development and associated rationalities have redefined the way that community positions are articulated vis-à-vis outsiders. Considering that mining activities surround the village of Chiu-Chiu, the Indigenous Community of Chiu-Chiu has had to learn how to negotiate with both State authorities and large corporations within a neoliberal perspective of development. Elements such as private rights, individual property, free markets and free trade have entered Chiu-Chiu's negotiations with external actors, forcing them in some respects at least to adopt a reductionist view about natural resources, especially water, in a way that has inevitably impacted local claims. In fact, community cohesion has been

disturbed by external pressure as a consequence of a regional water management system that is detached from local claims and needs.

In this regard, analysis of IGDs shows the way that different age groups have followed their own interests, which do not necessarily represent other age groups, thereby generating community fragmentation and schism. The external actors have therefore capitalised on this, defining ways of negotiation and types of community initiatives that ultimately work in their favour. In particular, Codelco and the Chiquicamata project (the world's largest open-cast copper mine) exemplify various efforts to create initiatives in Chiu-Chiu that do not necessarily recognise local claims to natural resources, especially water, thus promoting other sorts of short-term relationships that have brought with them an asymmetry of information and unequal access to benefits, exacerbating internal competition among residents.

Ancianos have seen how the 'Assembly', the traditional organisation that articulates positions to outsiders, has started to be severely affected. *Ancianos* argue that the main elements for discussion with 'outsiders' should arise from these 'horizontal' meetings as they represent the voice of the community. The Assembly is considered to be the place where all community members can actively participate in the design of the village's future, through internal dialogue. In their view of development, they see the Assembly as the way to define internal demands and claims that they want to negotiate externally and that it therefore constitutes an Atacameño voice that is more related to the daily lives of the inhabitants of the village. However, over the last three years the Assemblies have become places where the leaders (most of them from the middle-aged adults group) inform the community about the decisions they have made, rather than serving as a venue for discussion, debate and resolution.

This situation has isolated the *ancianos*' priorities regarding water and land as elements for preserving their territory, forcing them to step aside from the external negotiations to some extent. The weakening of the Assemblies as places of active members' participation has created visible tensions between *ancianos* and middle-aged adults due to the type of vertical leadership that the latter have set up in the village. Taking advantage of this split, Codelco has started to delegitimise the *ancianos*' claims to natural resources arguing that they are not prepared to understand the complexity of the distribution of water rights and

the legal restrictions on the company. In fact, this company has further reduced the *ancianos'* participation in external negotiations by pointing out that they are also against the 1981 Water Code (the main argument of *ancianos*), but that they have to move on and initiate a new constructive dialogue. In short, the injustices arising from the application of the Water Code are past and gone for Codelco, as are the *ancianos'* claims to water and land – and should no longer even be on the table.

Meanwhile, middle-aged adults have become a powerful group as their members led the Indigenous Community of Chiu-Chiu between 2009 and 2012. As mentioned before, they have reduced the decision-making role of the Assemblies and acquired, as board members, a crucial status in external negotiations. Contrary to the *ancianos'* positions towards outsiders, middle-aged adults have based their claims on external solutions that the State, under the Indigenous Law, has defined for them. In fact, internal claims based on the traditional water and land rights have been reduced to concrete and specific initiatives, driven by State authorities such as CONADI (National Corporation for Indigenous Development) and INDAP (Institute of Agricultural Development) and the big corporations. Under the middle-aged adults' leadership both the elements of discussion and the ways of articulating their position to outsiders have been redefined externally rather than representing internal claims and demands, mainly because the Assembly has ceased to be officially consulted. In contrast, individual and board meetings have become more effective means to press forward negotiations with outsiders.

Thus, short-term initiatives under the Indigenous Law have become very popular with some middle-aged adults within the village, with infrastructure and equipment as the main targets. The recovery of water rights has turned into a secondary issue and projects such as improvements to the museum and the Inca Coya Lagoon infrastructure have started to take priority. In this scenario Codelco has seen an opportunity to 'leave behind' water and land claims and therefore has supported these initiatives, although they have been defined mainly by the board of the community without the approval of the Assembly. Consequently, most of these initiatives have failed to ease the tensions of the middle-aged adults' relationships with the other age groups. Indeed, they have served to exacerbate them, especially with some *ancianos* who have questioned the way that some of the middle-aged adults have started to negotiate individually with large corporations, as well as the growing participation that they have given to the Aymara. The main argument made

by *ancianos* is that although the Aymara are equal with respect to the law, they do not have an ancestral relation to the land and this means that they will be seeking only temporary initiatives based on short-term advantage, thereby pushing middle-aged adults into making bad decisions in their dialogue with outsiders.

Codelco has argued that the locally disputed role of the Aymara and the lack of leadership from the board of the community have limited the real capacity of their CSR (Corporate Social Responsibility) efforts such as the 'Codelco Good Neighbour' programme to contribute to village development. Indeed, this company has placed all responsibility for the investment's success in the community board. Arguing that local initiatives must emerge from village needs, it has used internal differences to minimise their initiatives and to justify their argument that the main problem facing the community is not access to water or land but the inability to work together and 'responsibly' manage their needs.

In light of such internal differences, the way that the younger generation articulates their claims to outsiders could be seen as a synthesis between the *ancianos*' and middle-aged adults' experiences. Although this age group does not actively participate in the Assemblies and does not have representation on the board, it has acquired a special status both internally and externally. Internally, the younger generation has become a group that criticises the organisation of the negotiations of both *ancianos* and middle-aged adults. For them, while the Assemblies are trapped between the reluctance of some *ancianos* to dialogue and the concerns of middle-aged adults to obtain economic benefits, the board meetings with external actors are not considered as part of the participation process at all. Therefore, this age group has started to rethink negotiations, going beyond the old forms of deliberation and participation, promoting sectorial meetings under the umbrella of the Indigenous Law, but also considering the historical debt that the State owes to the indigenous people.

Externally, the younger generation has engaged in new areas of dialogue, with the aim of avoiding the tensions that both *ancianos* and middle-aged adults have experienced with outsiders, especially Codelco. Through artistic initiatives this group has acquired communication skills and an openness to innovation (such as online participation and diffusion), mixing ancestral claims over water and land with specific initiatives in housing and education. In this regard, Codelco has understood the important role that the younger

generation could potentially acquire in articulating negotiations with outsiders. Therefore, it has shown empathy towards this age group, arguing that the other generations are involved in local schisms and cannot see all the opportunities that mining can provide to them. Hence, through sectorial initiatives they have tried to bypass the role of the Indigenous Community of Chiu-Chiu, in an attempt to reorient the targets for future dialogue away from water and land claims, towards job prospects and opportunities.

In summary, different views of development and associated rationalities have generated different positions in negotiations with outsiders for the three age groups identified in this work. This situation has weakened community cohesion vis-à-vis the outside world, and has been used by Codelco to redefine how negotiations with the community will proceed. While Codelco discredits the *ancianos*' claims regarding water and land, arguing that they are out-dated, it also discredits the way middle-aged adults' promote leadership and representativeness, flagging divisions within the community. The younger generation, meanwhile, emerge as a group that Codelco has tried to control through job opportunities and local project support without much success.

8.1.3 Resistance strategies

Finally, a third area of understanding of this research has to do with the way that perceived costs and benefits of local development promoted by the State authorities and large corporations has prompted new forms of resistance. The social and environmental tensions that mining companies are causing in and around the village of Chiu-Chiu have become an issue of protest that transcends internal differences and that on the State's side exceeds the capacity of neoliberal dynamics in handling them. With the mining companies being perceived as 'the team to beat' and the State as an 'unfair referee', this community has been united in acknowledging that their internal differences are not so deep as to blind them to the irreparable consequences that mining has generated, with the State as an accomplice. In this scenario, the Indigenous Community of Chiu-Chiu as a whole holds to the same diagnosis, that the sustainability of the village depends on their capacity to resist external pressure, notably in relation to water availability.

The extensive water rights that Codelco hold to the Loa River is an example of these social and environmental externalities, as productive and cultural activities have been

affected due to water scarcity. All members of the community are mindful of the injustices of the Water Code, although some of them have defined their resistance by building on other elements of local social and environmental relations. But the diagnosis is the same: Codelco took advantage of the water rights expropriation that the State ordered and the only loser in this move was the village of Chiu-Chiu. Therefore, new forms of resistance have begun to spring up, confusing the debate and surprising everyone. However paradoxical it may sound, the village of Chiu-Chiu has seen how external pressure in terms of the claims and demands described above has generated a heterogeneous group that could be more difficult to handle.

Thus, analysis of IGDs shows how resistance to the State and large corporations has revealed new arguments and discourses. The fact that *ancianos* have been the most significantly affected by the actions of external actors, and even discredited by Codelco, has not been an obstacle to this age group in asserting the importance of territory as a key part of Atacameño resistance. Older residents, and notably women (despite the sexist dynamics to which they are exposed) have strengthened their role in terms of transmission of both cultural and productive activities to the younger generation. Demanding recognition of ancestral water rights, they have continued their resistance by working on agriculture, despite the physical and emotional expense that the relative lack of water has had on the village. Also, they have promoted cultural activities such as the 'Channel Cleaning' and the 'payment to the land' efforts in order to promote the importance of 'being an Atacameño'.

The main argument here is that water is life and therefore future generations must be able to enjoy the village as they did before the application of the Water Code. Although this age group have suffered a number of injustices over recent years, they believe that the community still has a future. Therefore, they insist that the role of the older generations is crucial in transmitting the meaning of what it is 'to be an Atacameño,' arguing that the resistance should be based on the ancestral heritage of this ethnic group and not on the recent recognition of the Indigenous Law. This view has been well received by the younger generation who has seen elements of their grandparents' wisdom that are crucial to the sustainability of the indigenous people, especially in a place as dry as the Loa Province.

Meanwhile, middle-aged adults have framed their resistance according to 'the rules of the game' as defined by the Indigenous Law. While *ancianos* are open to some structural

changes, middle-aged adults have agreed that recovering water and land within the CONADI initiatives is important in order to consolidate new programmes and possibilities for the future. Being reformist, the middle-aged adults have used the opportunities that the State has given them, such as the ADI (Indigenous Development Area) meetings to place their local claims on the authorities' agenda. While waiting for the recovery of water rights under the Fund of Water and Land led by CONADI, which they feel ultimately represents long-term growth and sustainability, they have taken up the cause of labour opportunities for middle-aged adult women and especially courses for the younger generation.

Some middle-aged adults still believe that action based on the Indigenous Law will be the answer to the perceived costs associated with the actions of the mining companies. Although they acknowledge that water remains the main issue for the community, using the benefits that this law has given them has nonetheless improved their quality of life (for example special funds and educational scholarships). Therefore, their resistance has been linked to legal tools that incrementally improve their quality of life. In fact, some middle-aged adults (both men and women) believe that the State will eventually fulfil their expectations, especially with the ratification of the 169 ILO Convention.

The younger generation's resistance has been somewhat different. This group has benefited from almost all of the external negotiations, since these invariably relate to the future of the village, while the perceived costs of local development have been lower for this group. For instance, the younger women have broken through the sexist limitations regarding labour and participation that can still be seen in other generations. However, this age group is also keenly aware of the injustices that the village has suffered in terms of water access. Still, both middle-aged adults and *ancianos* have yet to recognise them as appropriate participants in external negotiations, as they are perceived as lacking in the relevant experience.

Taking this into account, the younger generation's resistance draws on the insights of *ancianos* while going beyond the middle-aged adults' exclusive reliance on legal tools. They have understood that the meaning of what it is to be an Atacameño goes beyond their mere recognition as provided by the Indigenous Law. Thus, symbolic transmission of their cultural roots from *ancianos* is notably reflected in new claims and demands through artistic initiatives. In addition, the younger generation have built on the adults' legalistic

view of resistance, combining it with the international tools of the 169 ILO Convention. As such, the resistance by the young generation blends ancestral and legal discourses, thereby giving this age group greater potential for future negotiations in a world of multi-scalar alliances and discourses.

Thus, this research has shown how IGDs are reflected, to what extent and in what ways different age groups resist external actors and processes connected with the Water Code. Although external pressure has indeed redefined many local ideas of development, social and environmental externalities affecting water scarcity have nonetheless created an internal narrative that rests in the fact that the external actors owe a debt to the Indigenous Community of Chiu-Chiu. In short, when dealing with water issues, internal differences (regarding notions of development and participation) appear to be secondary. Resistance against community inequalities on the issue of water (no matter how they are manifested) has become the top priority.

8.2 FUTURE RESEARCH

This work has examined how far and in what ways IGDs shape cultural differences within indigenous communities, in terms of notions of development, negotiations with external actors, and choices about resistance strategies. IGDs were indeed found to be important in all of these areas, albeit in complex ways. In this regard, this research has helped to generate a more nuanced understanding of indigenous communities in Chile.

In turn, the findings of this thesis could be useful in informing future research in several important ways. Firstly, this study underscores how neoliberal dynamics regarding water resources can help to redefine local ideas about development over time, increasing local divisions and hence vulnerability. Through IGDs this research has shown how the Water Code has resulted in new ideologies within the indigenous communities confronting it, at the price of representing generational blocks as homogeneous. In addition, it has shown the weaknesses of the Indigenous Law with regard to its ability to bond indigenous communities and to represent their ancestral claims. However, it has also shown the vulnerability of these communities in terms of their political and economic weight in confronting the impacts generated by mining companies. The transformation of ideas of development is refracted through IGDs, thereby rendering them more heterogeneous than

previous 'community' viewpoints. Further research can explore this differentiation in more detail.

Secondly, this research points to some of the ways that powerful external actors can take advantage of such differentiation at the local community level. Further research should analyse unequal power relations that both State authorities and large corporations have imposed on local communities, thereby generating even further inequality. This is so in relation to not only ethnicity and gender, but also concerning IGDs for, as this research has shown, such inequality and vulnerability can, and often does, assume intergenerational guise.

Finally, this research suggests that there is a fertile research agenda to be pursued on the multifaceted and differentiated nature of resistance by local communities faced with modern development, often with IGDs at its core. This research has shown the way different age groups have created new discourses and narratives, especially in negotiations with State authorities and large corporations. Therefore, it provides elements necessary for a deeper understanding of indigenous people's dynamics that may be useful in analysing the political scenario that indigenous people are generally facing under new processes such as the 169 ILO Convention, as well as on-going articulations of globally-linked mining capitalism.

This thesis has thus explored to what extent and in what ways IGDs shape local community responses to outside intervention – here marked by large-scale mining and serious water depletion underpinned by the Pinochet-era Water Code. The thesis found that IGDs were indeed a factor in the elaboration of community divisions in the face of such a development onslaught. At the same time, it found that IGDs could also be the basis for community cohesion in novel ways, as youth in particular have attempted to draw inspiration from both *ancianos* and middle-aged adults in their own outlook and responses to the changes confronting their community. In the process, this study has hopefully contributed to the idea that a deeper understanding of inter-generational dynamics can ultimately serve as a stronger basis for the promotion of coherent community responses to socially and environmentally damaging development.

APPENDIX

Appendix A. Ethical approval letter Preliminary Field Work

Francisco Molina Camacho,
Department of Geography,
14th February 2011,

Dear Francisco,

REP(GGS)/10/11-8 'Negotiated rationalities, politicised identities: inter-generational relations, water conflicts and mining in Chiu – Chiu, Chile.'

I am pleased to inform you that the above application has been reviewed by the GGS Research Ethics Panel that FULL APPROVAL is now granted.

Please ensure that you follow all relevant guidance as laid out in the King's College London *Guidelines on Good Practice in Academic Research* (http://www.kcl.ac.uk/college/policyzone/attachments/good_practice_May_08_FINAL.pdf).

For your information ethical approval is granted until the 13th February 2012. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: <http://www.kcl.ac.uk/research/ethics/applicants/modifications.html>

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (<http://www.kcl.ac.uk/research/ethics/contacts.html>). We wish you every success with this work.

With best wishes

Daniel Butcher
Research Ethics Administrator

Appendix B. Ethical approval letter Field Work

Francisco Molina Camacho
Department of Geography
20th October 2011

Dear Francisco,

REP(GGS)/11/12-1 'Negotiated rationalities, politicised identities: inter-generational relations, water conflicts and mining in Chiu'

I am pleased to inform you that the above application has been reviewed by the GGS Research Ethics Panel that FULL APPROVAL is now granted.

Please ensure that you follow all relevant guidance as laid out in the King's College London *Guidelines on Good Practice in Academic Research* <http://www.kcl.ac.uk/college/policyzone/assets/files/research/good%20practice%20Sept%2009%20FINAL.pdf>

For your information ethical approval is granted until the 19th October 2012. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: <http://www.kcl.ac.uk/research/ethics/applicants/modifications.html>

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (<http://www.kcl.ac.uk/research/ethics/contacts.html>). We wish you every success with this work.

Best Regards,

Daniel Butcher

Appendix C. Guide questions for qualitative interviews

Intergenerational aspect

- What do you understand about intergenerational differences?
- Have you ever felt intergenerational differences in the indigenous community of Chiu-Chiu?
- Regarding what topics do intergenerational differences seem to be more important?
- What do you think are some advantages and disadvantages of intergenerational differences? How can you overcome a generation gap?
- Do you agree or disagree with members of other generations about topics such as development or natural resources?
- What are some topics that people of different generations disagree on? Is it possible for people of different generations to agree on things as well?
- Which changes in traditional values could contribute to a generation gap?
- What role does technology change play in creating a generation gap?
- Are people from the "older" generation always more wise and correct in their ways of thinking? Why or why not?
- Do you think generation gaps allow older generations to have more "authority" in their relationships with younger people?
- If you could give one important message to another generation, what would it be?

Development and natural resources

- How do indigenous residents of Chiu-Chiu perceive social, cultural, economic and cultural changes?
- Which is their vision of development and natural resources?
- Are there internal differences in this vision about development and natural resources? If so, what are those differences?
- How are cultural, social and economic practices related to the Loa River?
- How are these practices affected by changes in water allocation?
- What types of problems are affecting the community in these days?
- How have these problems changed over time?
- How do the indigenous community of Chiu-Chiu construct their rationality?
- To what extent is this rationality based on a connection between identity and culture?
- How is the concept of territory understood among the indigenous community of Chiu-Chiu and how important is to them?
- How and to what extent are community residents able to articulate their claims regarding water rights?

Organization and relations with other actors

- To what extent and in what ways did the indigenous community of Chiu-Chui mobilise and organise politically in the past and how has it changed over time?
- Who are recognised as leaders in the community of Chiu-Chiu?
- How are decisions made in the community?
- Are these formal mechanisms or is it more informal?

- To what extent and in what way is the indigenous community of Chiu-Chiu seeking to resist Codelco? Or State development programmes?
- Does the community represent the whole village? If not, what are the differences in the community?
- Which are the community concerns about the social and environmental impacts of Coldeco?
- What relationship exists between the indigenous community of Chiu-Chiu and other key actor as Government, NGOs, and big corporations?
- How the indigenous community of Chiu-Chiu relates to outsiders? Do they negotiate? What type of negotiation?
- How do residents feel about these negotiations?
- How are community decisions and information shared with outsiders? Who is responsible for disseminating community ideas with outsiders?

Market relations

- How did the indigenous community of Chiu-Chiu develop market dynamics in the past and how it has changed over time?
- Which is the role of the State and the big corporations in the changes of market dynamics?
- How did the new market dynamics affect the traditional productive activities within the community?

Appendix D. List of interviewees

1. National Level

N°	Date	Code	Sector	Place
1	13/12/11	INT 14	Academic 1	Santiago
2	13/12/11	INT 15	NGO representative 1	Santiago
3	16/12/11	INT 16	Academic 2	Santiago
4	16/12/11	INT 17	NGO representative 2	Santiago
5	29/12/11	INT 18	Academic 3	Santiago
6	03/01/12	INT 19	National authority 1	Santiago
7	03/01/12	INT 20	National authority 2	Santiago
8	03/01/12	INT 21	National authority 3	Santiago
9	04/01/12	INT 22	NGO representative 3	Santiago
10	04/01/12	INT 23	NGO representative 4	Santiago
11	01/03/12	INT 37	National authority 4	Santiago
12	17/04/12	INT 52	NGO representative 5	Santiago

2. Regional Level

N°	Date	Code	Sector	Place
1	22/11/11	INT 11	Regional authority 1	Calama
2	30/11/11	INT 12	Civil Society 1	San Pedro de Atacama
3	22/02/12	INT 33	Regional authority 2	Calama
4	06/03/12	INT 38	Big Corporation representative 1	Calama
5	12/03/12	INT 40	Regional authority 3	Calama
6	12/03/12	INT 41	Civil Society 2	Calama
7	13/03/12	INT 42	Civil Society 3	Calama
8	13/03/12	INT 44	Big Corporation representative 2	Calama
9	19/03/12	INT 45	Regional authority 4	Antofagasta
10	19/03/12	INT 46	Regional authority 5	Antofagasta
11	20/03/12	INT 47	Regional authority 6	Antofagasta
12	20/03/12	INT 48	Regional authority 7	Antofagasta
13	19/04/12	INT 53	Civil Society 4	Calama
14	25/04/12	INT 54	Civil Society 5	San Pedro de Atacama

3. Local Level:

a. Authorities and civil society

N°	Date	Code	Sector	Place
1	21/11/11	INT 8	Civil Society 6	Chiu-Chiu
2	01/12/11	INT 13	Municipal authority 1	Calama
3	16/01/12	INT 24	Municipal authority 8	Chiu-Chiu
4	14/02/12	INT 28	Civil Society 10	Chiu-Chiu
5	16/02/12	INT 29	Municipal authority 2	Chiu-Chiu
6	24/02/12	INT 34	Municipal authority 3	Calama
7	28/02/12	INT 35	Municipal authority 4	Calama

8	28/02/12	INT 36	Municipal authority 5	Calama
9	13/03/12	INT 43	Municipal authority 6	Calama
10	28/03/12	INT 49	Municipal authority 7	Calama
11	28/03/12	INT 50	Civil society 7	Chiu-Chiu
12	28/03/12	INT 51	Civil society 8	Chiu-Chiu
13	03/05/12	INT 56	Civil Society 9	Chiu-Chiu
14	08/05/12	INT 59	Municipal authority 9	Calama

b. Members of the community

N°	Date	Code	Group	Gender	Sector/Characteristics	Place
1	16/02/11	INT 1	Middle-aged adults	Male (M)	Indigenous leader 1	Chiu-Chiu
2	16/02/11	INT 2	Middle-aged adults	Female (F)	Indigenous leader 2	Chiu-Chiu
3	16/02/11	INT 3	Ancianos	Female (F)	Indigenous leader 3	Chiu-Chiu
4	16/02/11	INT 4	Younger generation	Male (M)	Indigenous representative 1	Chiu-Chiu
5	17/02/11	INT 5	Ancianos	Male (M)	Indigenous representative 2	Chiu-Chiu
6	17/02/11	INT 6	Ancianos	Male (M)	Indigenous representative 3	Chiu-Chiu
7	12/11/11	INT 7	Middle-aged adults	Male (M)	Indigenous leader 4	Chiu-Chiu
8	21/11/11	INT 9	Middle-aged adults	Female (F)	Indigenous leader 5	Chiu-Chiu
9	21/11/11	INT 10	Younger generation	Male (M)	Indigenous representative 4	Chiu-Chiu
10	17/01/12	INT 25	Ancianos	Female (F)	Indigenous representative 5	Chiu-Chiu
11	18/02/12	INT 26	Ancianos	Female (F)	Indigenous representative 6	Chiu-Chiu
12	13/02/12	INT 27	Ancianos	Male (M)	Indigenous leader 6	Chiu-Chiu
13	22/02/12	INT 30	Ancianos	Female (F)	Indigenous leader 7	Chiu-Chiu
14	22/02/12	INT 31	Middle-aged adults	Male (M)	Indigenous leader 8	Chiu-Chiu
15	22/02/12	INT 32	Middle-aged adults	Male (M)	Indigenous leader 9	Chiu-Chiu
16	11/03/12	INT 39	Ancianos	Male (M)	Indigenous representative 7	Chiu-Chiu
17	02/05/12	INT 55	Ancianos	Male (M)	Indigenous leader 10	Chiu-Chiu
18	08/05/12	INT 58	Middle-aged adults	Male (M)	Indigenous representative 8	Chiu-Chiu
19	08/05/12	INT 60	Younger generation	Female (F)	Indigenous representative 9	Chiu-Chiu
20	03/05/12	INT 57	Younger generation	Male (M)	Indigenous leader 11	Calama

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